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ABSTRACT

After fleximode was introduced into the Western Australian TAFE system, its cost and effectiveness compared with traditional delivery systems were evaluated. Fleximode, as practiced in Australia, was adapted from a mode of study pioneered in England. It offered students the independence of off-campus study in combination with access to college resources and interaction with college staff and students. Six projects were selected for fleximode delivery for the first semester, 1989. Four programs were delivered as variations from traditional face-to-face delivery: accounting 1A, associate diploma of social science (child care),.motorcycle mechanic apprenticeship stage 2A, and petrol fuel injection. Two programs adapted from correspondence delivery were studied: commercial pilot license and diploma in local government. The following types of comparisons were made to evaluate program costs and benefits: students' final examination results, retention rates, teacher's perceptions, students' perceptions, and financial costs. Comparisons made between the fleximode programs and traditional delivery methods revealed no significant differences in educational efficiency as indicated by students' retention rate and examination results. A number of qualitative differences were found between the programs, such as learner satisfaction, and these differed between individuals within programs. (Appendixes include 31 references and instruments.) (YLB)

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FLEXIMODE:
Within Western Australia TAFE

Dorothy Toussaint

Western Australia Department of TAFE

ADELAIDE 1990

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Contents

1 INTRODUCTION

Fleximode 1

2 FLEXIMODE IN BRITAIN AND AUSTRALIA

Britain 2
Organization of Flexistudy 2
Evaluation of Flexistudy 2
Australia 3
Victoria 3
South Australia 5
Western Australia 8

3 PROJECT METHODOLOGY

Method 10
Instruments Developed for the Study 11
Withdrawers' Interview Schedule 11
Students' Questionnaire Schedule 11
Lecturers' Interview Schedule 11
Comparison of Costs 12
On-Campus Teaching 12
Off-Campus Teaching 12
Resource Materials 12
Contingency Costs Per Student 13
Classroom Provision 13

4 ACCOUNTING 1A

Programme Delivery 14
Evaluation 14
Student Outcomes 14
Reasons for Withdrawal 14
Comparison of Costs 17
Students' Comparisons of Delivery Modes 18
Lecturer's Comparisons of Delivery Modes 18
Lecturer's Conclusions 19

5 ASSOCIATE DIPLOMA OF SOCIAL SCIENCE (CHILD CARE)
Programme Delivery . . . 20
Evaluation . . . 20
Student Outcomes . . . 20
Comparison of Costs . . . 21
Degree of Students' Satisfaction . . . 21
Students' Comparisons of Delivery Modes . . . 22
Lecturer's Comparisons of Delivery Modes . . . 22
Lecturer's Conclusions . . . 23

6 FLEXIMODE TRADE PROGRAMMES
Apprenticeship In Motorcycle Mechanics Stage 2A . . . 24
Programme Delivery . . . 24
Evaluation . . . 24
Student Outcomes . . . 24
Comparison of Costs . . . 24
Degree of Students' Satisfaction . . . 25
Students' Comparisons of Delivery Modes . . . 25
Lecturer's Comparisons of Delivery Modes . . . 26
Lecturer's Conclusions . . . 26
Petrol Fuel Injection . . . 27
Programme Delivery . . . 27
Evaluation . . . 27
Student Outcomes . . . 27
Comparison of Costs . . . 27
Degree of Students' Satisfaction . . . 27
Students' Comparisons of Delivery Modes . . . 28
Lecturer's Comparisons of Delivery Modes . . . 28
Lecturer's Conclusions . . . 29

7 EXTERNAL STUDIES FLEXIMODE
Commercial Pilot Licence Course . . . 30
Programme Delivery . . . 30
Outcomes of the Programme . . . 30
Diploma in Local Government . . . 31
Programme Delivery . . . 31
Evaluation . . . 31
Student Outcomes . . . 31
Comparison of Costs . . . 32
Students' Comparisons of Delivery Modes . . . 32
Lecturer's Comparisons of Delivery Modes . . . 33
Lecturer's Conclusions . . . 34

8 COMPARISON BETWEEN FLEXIMODE PROJECTS

Organization of Fleximode 35
Students' Experience of the Organization 35
Understanding Subject Content 36
Comparison between Modes of Delivery 36
Important Aspects of Fleximode 37
Effective Ways of Learning 38
Choice of Delivery 40
Lecturers' Conclusions 40

9 FURTHER DEVELOPMENTS, POSSIBLE PROBLEMS AND SOLUTIONS

Fitting Fleximode into the College Organization 41
Other Types of 'Teaching' 41
Payment for Fleximode - Off-Campus 41
Payment for Fleximode - On-Campus 42
Use of On-Campus Time 42
Developing Fleximode Resource Material 42
Use of Technology 42
Staff Development 43
Gaining Staff Co-operation 43
Reasons for Introduction 43

REFERENCES

APPENDIX 1

Telephone Survey:
Why do students drop out of courses?
Subject: Accounting 1A

APPENDIX 2

Student Questionnaire

APPENDIX 4

Composition Of Groups Responding to Survey

1

INTRODUCTION

There are two seemingly opposing pressures on TAFE within Australia: to cut costs and improve efficiency and, at the same time, to extend the opportunity for many more groups within the community to participate in further education. The latter pressure has become particularly urgent with the emergence of award restructuring as a dominant force within industrial relations, as this has the potential to make job classification systems, wage systems and career progression centred on skill acquisition.

John Coffey, the open learning consultant for the Council for Educational Technology in Great Britain, writes of similar pressures on educational institutions in the United Kingdom. He notes that, although there are strong economic stringencies, continuing retraining of individuals is required as the industrial base of the economy changes and the average age of the population increases (Coffey 1980).

Delivery systems which offer an alternative to the traditional means of teaching by class contact or correspondence, have been seen as both having the potential to be more cost effective, as well as being more accessible to a wide range of community groups. The Commonwealth Government, which contributes about one-third of the funding of the TAFE system in Australia, has nominated changes in delivery systems as one means of improving productivity in TAFE (Dawkins 1990).

However, Rae Blesing (1987), Head of the Migrant Education in South Australia, makes the point that any new classroom programmes must maintain educational integrity. The present report, therefore, is concerned with evaluating 'Fleximode', a possible new means of subject delivery in TAFE, in terms of its potential for cost efficiency and extension of opportunity, as well as educational effectiveness.

Fleximode

Within TAFE, as with most educational systems, there have traditionally been two main methods of organizing instruction for students. The student can either attend regular classes, where a teacher normally uses the traditional expository method of teaching, or the student can study by correspondence. Study by correspondence (distance education or external studies) usually entails the student receiving a study guide and lesson notes of some sort, and being required to send assignment work to a tutor.

The difference between the two systems is the type and degree of teacher-student contact, and the degree of control the student has over how he/she studies the material (such as pace of study, location and so on). It is thus useful to see distance education (or external studies) and face-to-face teaching as related methodologies on two educational continua: one based on the teacher-student relationship and the other on the degree of control the student has over such variables as pace and place of study (see Figure 1.1).

At one extreme of both continua the student works from self-study materials at his/her own time and place of study while at other extreme, the student learns by the traditional classroom method, from a teacher, in a set place at a set time. In between these two delivery modes there are numerous variations of study type combining degrees of teacher-student contact and pace of learning. The term 'fleximode' is used to define a mode of study which incorporates some of these variations.

Fleximode is usually characterised by a pre-planned combination of on- and off-campus study (Ashurst 1986). It is seen as providing the student with the independence of off-campus study in combination with access to college resources and the opportunity to interact with college staff and students.

Fleximode was introduced into Australia by the Gordon College of TAFE (Victoria) in 1978. It was adapted from a mode of study pioneered by the Barnet College of Further Education in 1977 after six years of collaborative work with the National Extension College, the main centre for the provision of correspondence courses in Great Britain. Barnet College has patented the name 'Flexistudy' to describe the way these courses are delivered (National Extension College Reports 1980). Fleximode is now available in other TAFE colleges in Victoria. Some of these are documented in Jack Foks's report to the Ministry of Education, Victoria, *Open Learning in the Victorian State Training System* (Foks 1988). Of the other Australian States, only South Australia seems to be using fleximode, at the Adelaide and the Light Colleges of TAFE. The purpose of this research study was to review the fleximode literature and then introduce fleximode into the Western Australian TAFE system and evaluate its cost and effectiveness compared with traditional delivery systems. Some of the questions asked were influenced by experiences in the other States.

The report begins with some historical background on fleximode and a description of how it operates in England and Australia, in particular the way in which it is organized and administered. The background against which fleximode was introduced within Western Australia is also described, including events leading to its proposal and the various stakeholders in the operation. Details of the various fleximode subjects to be introduced are then given and the proposed method of evaluation is described, including details of survey instruments. The fleximode programmes are then described as a series of case studies, then comparisons made between the programmes in order to highlight important features. Finally, the various organisational and administrative problems associated with fleximode are discussed and recommendations made about possible directions for TAFE.

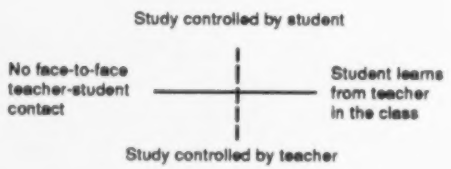
Study controlled by student
No face-to-face teacher-student contact
Student learns from teacher in the class
Study controlled by teacher

Figure 1.1
Relationship between teacher-student interaction and the degree to which the study is controlled by the student

2

FLEXIMODE IN BRITAIN AND AUSTRALIA

Fleximode, as practised in Australia, was adapted from a mode of study pioneered in England by the Barnet College of Further Education. This section therefore describes the background more extensively and discusses where and how fleximode operates in England and Australia.

It is certain that fleximode delivery is used in educational systems other than in England and Australia. However, as Ashurst (1986) also found, a literature search for fleximode (using appropriate descriptors) utilising the ERIC and the Australian Education Index databases gave UK materials only. There has apparently been extensive development of innovative teaching methodologies in North America, and this has occurred within an educational system that is much more open and flexible than the systems found in either Britain or Australia. A description of some American innovations can be found in Farren (1989) and Mathers (1988). These will not be described in this report.

Britain

In Britain, programmes and institutions which allow students flexibility in their learning have been given a high profile because they have been seen as a means of promoting social equity (Farren 1989). A number of institutions have been established specifically to provide this flexibility. The National Extension College (NEC) was founded in 1963 as a private institute which would provide 'second-chance' education for adults. In 1968, the government-funded Open University was opened for much the same reason, and this organization has attracted world-wide interest and notable research in open learning. The Open Tech programme was founded by the British Government in 1983 and led to a number of developmental projects, mostly aimed at producing resource materials to support independent learning in the workplace and to develop work-related skills through non-traditional delivery mechanisms. Most recently the Open College has been established, drawing on the best of the materials previously produced (Farren 1989). The Open College offers courses both to individuals and businesses, delivered through a network of Open Access Centres and the National Distance Learning Centre (operated on behalf of the Open College by the Open University).

Flexistudy grew out of an attempt by the NEC to improve the traditional type of correspondence course. The College offered courses only by correspondence, although supporting materials such as radio and television programmes, tapes, kits, weekend courses and seminars were also available. In 1971 the college programme was expanded to offer 'linked' courses in which the student works from NEC course materials but also attends classes one night a week. Barnet College, after six years of working with NEC offering linked courses and Saturday conferences for correspondence students, introduced flexistudy.

Flexistudy, as it operates in Barnet and elsewhere in the United Kingdom, has been well documented by Ashurst (1986), an NEC College Report by Barnet College (1980) and Greagg (1985). A summary only of the relevant points will be given in this report.

Organization of Flexistudy

A student enrolling in fleximode at Barnet College is given a learning package which consists of:

- the supply of correspondence material
- the marking and assessment of assignments
- the provision of tutorials in small group situations where possible or individually where necessary
- pre-enrolment counselling
- access on a regular basis to general advice and support e.g. Barnet offers 'surgery' time each week when the tutor is available by telephone or in person
- The use of college facilities and services

Rather than paying tutors on the basis of class contact and marking load separately, tutors are paid on a 'case-load' system. At Barnet the maximum case-load is 30, and no member of the staff can have more than one-third of their professional time allocated to Flexistudy. Within each tutor's programme, approximately 15 minutes per week (consisting of 10 minutes per student and five minutes administration and preparation time) is allowed for each flexistudy student. This is similar to the resource allocation for a traditional evening class at Barnet.

Students are charged a fee which is slightly higher than the part-time class fee. They are also required to buy any materials obtained from NEC or any other source. An overall limit of five years to complete a course is allowed before the student has to re-enrol and pay another enrolment fee. The time in which the student hopes to complete the course is negotiated between student and lecturer. Flexistudy has been used to cater for students who require study skills courses, introductory courses, secondary school and university matriculation courses, and professional qualification courses.

Flexistudy is now available in many other colleges throughout the United Kingdom. The Director of NEC, Ros Morpeth, reported that, in December 1988, there were 250 colleges registered with NEC as flexistudy colleges. NEC had more students (approximately10 000) studying NEC courses through flexistudy than with the college itself (approximately 7,000) (Morpeth, pers. comm., 1989).

Each college selects which flexistudy course it wishes to offer and uses material from NEC or other suppliers like the Open University and commercial correspondence colleges. Some colleges produce their own materials. The colleges set up their own administrative system, usually based on the Barnet model. NEC also produces a quarterly newsletter, *Flexistudy News*, which is sent out to all colleges.

Evaluation of Flexistudy

Barnet College has produced a 'flexistudy' manual for other colleges which explains the system used at Barnet and gives some useful information about teaching by fleximode (Barnet College of Further Education 1980). In the 1980 edition it is noted that, until then, 62 candidates had been produced for examination, with a pass rate of 70 percent in arts subjects and 50 percent in science subjects. They report this is similar to the usual pass rate for normal evening class. No figures on drop-out rates are given in the manual except

that they are much lower than the 50 percent that was initially predicted. In 1988, Sam McKeown, Head of Learning Resources Unit and Open Learning at Barnet College, reported 325 active students using flexistudy, with the targeted figure of 625 for 1988/89 (National Extension College, 1988).

Both Ashurst (1986) and Greagg (1985) report some data from a study of flexistudy students in the pilot year at Barnet College, a study which Ashurst believed to be the only study carried out on flexistudy students. In this study student numbers are not given but it is reported that females outnumbered males by two to one, with the median age of females being 33 years, compared to 28 years for males. Many of the students worked in jobs which made class attendance difficult.

By comparison with evening classes, the drop-out rate elsewhere was higher for flexistudy students but exam pass rates were also higher. Freeman quoted in Ashurst (1986, p7) concluded that '*Flexistudy performance is comparable with evening class study and better than in traditional correspondence courses*'.

Australia

Fleximode was introduced into Australia through the Victorian TAFE system, by Gordon Technical College, Victoria, in 1978.

In Victoria, distance education within TAFE was provided centrally by the Royal Melbourne Institute of Technology (RMIT) until 1975. In that year the system was changed to one combining central co-ordination through a unit that became known as TOCCA (TAFE Off-Campus Co-ordinating Authority), with local enrolment and student support systems provided by selected TAFE colleges throughout the State. The colleges and TOCCA combined to form the Victorian TAFE Off-Campus Network (VTOCN). This structure provided the opportunity for Victorian TAFE colleges to develop methods of subject delivery which could combine face-to-face teaching and distance education.

The main person behind the drive to establish fleximode at Gordon Technical College was Brian Scorgie, the co-ordinator of Off-Campus Studies. Scorgie had previously seen Fleximode operating in Great Britain. According to Scorgie (pers. comm., 1988), Victoria started with a few enthusiasts, plenty of staff development workshops and a strong background in adult-learning principles.

The philosophy of those involved in introducing fleximode into Australia can be deduced from the materials used for a fleximode workshop conducted at the Dandenong College of TAFE on October 13, 1986, by Brian Scorgie and Peter Smith, Head of the Learning Resource Centre of the then Gordon Technical College (Gordon Technical College, 1986). Participants were told that, with changes in the needs of present-day consumers of education and the wealth of educational resources now available, educationalists must look beyond the traditional ways of delivering education. Flexibility for consumers and congruency with adult-learning principles were emphasized but there was no mention of cost effectiveness.

Research on fleximode followed later: a literature survey by Lesley Greagg, Project Officer for the Off-Campus Network (Greagg 1985) and an evaluation of fleximode within the Victorian TAFE Off-Campus Network by Ashurst, a research officer within VTOCN (Ashurst 1986). The results of this evaluation will be described later.

Victoria

Fleximode has since spread to other Victorian colleges, not always organized in the same way as that at Gordon, and introduced for many different reasons. Fleximode has been seen as a way of: overcoming the problem of small classes; introducing face-to-face content into distance education courses; catering for students whose busy workloads make weekly class attendance difficult (for example, in Real Estate courses); increasing students' autonomy and independence; catering for the different needs of adult learners; introducing more technological content into teaching and making courses more cost-effective. In some cases, as with VTOCN, fleximode has been seen as just one small aspect of Open Learning in general, which they are presently trying to promote across the Victorian TAFE system.

Foks, manager of VTOCN, details a number of of the 'open learning' strategies used in the Victorian colleges and VTOCN generally, many of which are either specifically termed fleximode or fall into this category (Foks 1988). Some notable examples of fleximode delivery in Victoria during 1987 were:

VTOCN
Victorian Certificate of Education (VCE), Business Studies, Communication Skills and Real Estate

Dandenong
Advanced Certificate of Art and Design

Yallourn
Mechanical Engineering (in conjunction with oil companies), Electrical and Industrial Technician's Certificates

East Gippsland
Traineeship courses

Outer Eastern
Electronics in particular, but also a number of other subjects through various means - college-based tutors, itinerant tutors, community and industry based study centres, teleconferencing

Loddon-Campaspe
VCE through self-help groups and community centres, Introduction to Accounting

School of Mines, Ballarat
Accounting II, Basic Supervision

Wangaratta
Various subjects using community-based providers, and, in some cases, off- campus notes.

Moorabin
Factory and neighbourhood-centre-based programmes

Preston
Distance Literacy, English for Running a Business, VCE, Communication Skills

There are possibly many more fleximode programmes in operation; the above were detailed by Foks as simply a few

examples of a number of Open Learning initiatives developed by the Colleges.

Organization of Fleximode

The Victorian colleges appear to offer various combinations of face-to-face teaching and distance education for the fleximode subjects: classes every two or four weeks; blocks of teaching at the beginning and end of a course; and so on. There does not seem to be the same formalized offer of a 'learning package' as described for flexistudy at Barnet College. Where fleximode enrolments are formally offered in colleges, costs are usually shared between the off- and on-campus units. The off-campus staff usually enrol the student and give counselling as required. The students use off-campus study materials where these are available. Any face-to-face teaching done by the teacher is paid for by the on-campus unit. The assignment marking resulting from the student working partly in an external mode is paid for by the off-campus budget at half the usual rate. This pay differential is based on the assumption that the students are seeing the lecturer at regular intervals and thus they do not need as much detailed written feedback as conventional distance education students.

According to Scorgie (pers. comm., 1988), there have been problems with the way fleximode has been organized. For example, some teachers believe they are (or should be) marking fleximode students' assignments in a similar manner to off-campus students' assignments, and therefore be paid at a similar rate. Scorgie also believes that staff in Victorian colleges are still selecting fleximode as a second option after face-to-face teaching when class numbers are small or there are timetable clashes, whereas he believes in the educational advantages of the strategy particularly for adult learners.

Evaluation

An evaluation of fleximode in Victorian colleges was carried out in 1985 (Ashurst 1986) and an evaluation of fleximode course delivery at Yalloum College of TAFE in 1987 (Daye & Hanley 1987). The evaluation undertaken by Ashurst included four colleges, Gordon, Footscray, Preston and Ballarat, selected on the basis of numbers of fleximode enrolments and the need to minimize the travelling costs of the evaluation team. Ashurst believes there was a conscious policy decision to offer fleximode at Gordon while, at the three other colleges, '*Fleximode seems to have been tried either for institutionally-based firefighting or experimental reasons*' (Ashurst 1986, p. 8). The evidence tends to support this.

Gordon Technical College offered 38 subjects by fleximode between 1980 and 1984, whereas Ballarat decreased its offering from nineteen subjects offered in 1983, taken by over one 100 students, to only three subjects with a total of 14 students within the Certificate of Business Studies in 1985. At Preston College, enrolments in fleximode had remained consistently at about 100 students from 1983 and 1985. Footscray College had no formal fleximode enrolments but allowed on-campus students to swap to the off-campus mode where on-campus attendance became problematic, and gave off-campus enrolled students access to on-campus staff and teaching.

The flexibility of the fleximode offered depended primarily on the institution. At Ballarat, for example, all fleximode classes had a one-week-on, one-week-off cycle (introduced because of the perception that students preferred regular on-campus classes). This tended to make it a very structured programme. It could be argued that such a structured programme defeats the purpose of fleximode and Ballarat was experiencing a reduction in fleximode offerings. At Preston and Gordon, there was much more flexibility; the way the classes were run appeared to depend on fairly practical constraints, such as whether there was an external end-of-semester exam.

For the evaluation, selected staff members from the four colleges were interviewed by an off-campus co-ordinator and questionnaires were distributed to fleximode students. Responses indicated that staff generally saw fleximode as primarily advantaging students. Some of the perceived advantages were the development of independent learning skills; the correspondence mode was enhanced; on-campus students were given the added support of off-campus notes and students were allowed more choice in terms of subject delivery, class attendance and subjects available (as small classes became a viable proposition with fleximode). At one college, the benefit to the teacher of being able to use off-campus materials was mentioned, although this was seen as a negative point by a teacher at another college: "*Care would have to be taken that the system was not abused by teachers using the off-campus notes and being paid for assignment correction in addition to a teaching allowance or by students using the notes as a crutch*" (Ashurst 1986, p. 23). This is one small indication of the controversy that can be generated between teachers over fleximode.

Staff generally saw fleximode as being cost-efficient, due mainly to a more efficient use of college resources such as classrooms and off-campus notes. It was also seen as leading to a reduction in the drop-out rate of correspondence students, as a result of class contact being provided. Statistics, however, were not reported.

It is interesting that fleximode was not seen to cause many problems or difficulties, particularly at Ballarat, yet Ballarat seemed to be offering less fleximode courses. At two colleges, the difficulty of staff coping with fleximode was discussed, underlining the need for staff development to enable lecturers to use the new mode effectively. Footscray mentioned possible problems for students adapting to the new mode.

The interviews did not reveal a lot of administrative problems generated by fleximode, except in terms of enrolment (is it a separate category?) and the difficulty of actually deciding whether it was the role of the on- or off-campus staff to administer fleximode. This highlights what appeared to be the more fundamental problem, that is, the need to have a co-ordinated approach within an institution if fleximode was offered. For example, at Gordon, the teachers stressed the additional paperwork involved in working with both the on-and off-campus system and the lack of off-campus materials for all subjects. Similarly, the Head of Department at Preston cautioned against "*picking up leftovers rather than students interested in the mode*", that

is, the lack of forward planning in deciding which courses will be offered by fleximode.

The respondents from Gordon appeared to be the most positive about the future of fleximode, but at most other Colleges there were conflicting views. The off-campus co-ordinator at Preston, for example, was most positive, while the teacher noted "*there is no interest in the part of other members of the department*" and the Head of Department felt "*there is very limited potential at this college*".

Ashurst (1986) also asked students studying by fleximode to complete a questionnaire. Forty students were initially surveyed but only 22 students responded: five from Royal Melbourne Institute of Technology, 12 from Preston and five from Ballarat. Mostly the students were studying by fleximode because this was the only way in which the particular subject was offered. However, at RMIT, there was a mutual agreement between the teacher and students to study the subject by fleximode.

Students were asked about advantages and disadvantages of this mode of study. Perceived advantages compared to on-campus study were: reduced class and travelling time; the chance to cover more subjects in the time available; the chance to study at one's own rate and the greater ease with which studying could be fitted in with personal and business commitments. These are, of course, advantages when fleximode is compared to on-campus study. When students also compared fleximode to off-campus study, they mentioned that the face-to-face contact with lecturing staff was a real advantage.

The disadvantages mentioned most frequently were: the need for greater home study; the less frequent contact with the lecturer and the greater self-motivation and self-discipline required for successful studies by fleximode.

Students differed as to whether they would like to see the college offer other subjects by fleximode, although two students seemed enthusiastic enough to want to see it introduced for all subjects. Asked if they would enrol in fleximode again if given the option, only two students replied in the negative. However, some of the students who responded positively added qualifiers, such as prior subject knowledge.

In his conclusion, Ashurst (1986) is quite positive about fleximode but suggests that, if the use of fleximode were to be expanded in the TAFE system, it should be more thoroughly evaluated. An important aim of the present project was to introduce fleximode delivery into the WA TAFE system and carry out an evaluation in terms of cost, effectiveness and associated organizational and administrative problems.

Ashurst (1986) does suggest that fleximode may be cheaper to run than traditional classes due to the lower component of face-to-face teaching and, although there are some other associated costs relating to study materials, off-campus teaching and student support, these may be embedded in the system rather than additional. In the present project such costs were investigated in greater depth to find out whether fleximode is indeed a cheaper alternative.

Ashurst (1986) also suggests that student performance is no different under fleximode compared to traditional teaching modes but no actual data is actually produced. Only general comments by teachers such as: "*In my initial run-through fleximode, the results would be as good as average in off-campus or on-campus*" (Ashurst, 1986, p. 45) support this viewpoint. Another aim of the present project was therefore to report on the performance of students studying by fleximode compared to that of students in regular classes.

Dfferent impressions are given of drop-out rates by the respondents in Ashurst's study. Five teachers from Preston suggested the rate was about 25 percent to 30 percent, whereas the teacher from Gordon said "*You don't tend to get high drop-outs in nine of the units I've got in fleximode*" (Ashurst, 1986, p. 45). Again, however, no figures are given, therefore these were monitored in the present project.

Yalloum College of TAFE

The fleximode study programme at Yalloum College of TAFE involved offering the Mechanical Technician Certificate (Fluid Power) to Esso employees working off-shore. Students studied the off-campus component at the rig or at home and completed practical workshops at the college. Thirty-six students were enrolled in 1986-1987 and none left the course after commencing. Daye and Hanley (1987) report that most students appeared to enter the course because of financial incentives associated with the oil industry award but that they came to appreciate the benefits of managing their own learning and being able to apply their new-found knowledge on the job: "*I originally did the course for money but now the money is secondary to the course*". The course also appeared to be educationally effective as assessment grades for the fleximode students were higher than those of the on-campus students (Daye & Hanley 1987).

One of the strengths of the Yallourn programme appeared to be the quality of the staff development provided. Firstly, current skills, knowledge and attitudes of the staff were identified and then a staff development programme addressing identified needs was provided. Staff received training in curriculum writing, preparing interactive instructional materials, assessment techniques, student-instructor relationship and administration. Although staff were apparently initially reluctant to attend the formal workshops, Daye and Hanley (1987) report that many of them found 'a new lease of life', became more motivated in all areas of their teaching and began to act as change-agents for other teachers.

The programme at Yallourn College proved so successful that the number of subjects offered to Esso Australia employees is being extended.

South Australia

In South Australia, distance education is provided by the Adelaide College of TAFE, which has both on- and off-campus teaching. However, although fleximode has been tried at the College, the most concerted approach has been from Light College of TAFE, as part of its establishment as a centre for the open learning. The initial impetus for introducing fleximode into South Australia seems to have come from the visit of two staff members from the School of Business Studies, Adelaide College of TAFE, to three Victorian Colleges (Gordon, Preston and Broadmeadows) in August 1986, to observe fleximode in operation.

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The two lecturers recommended piloting some programmes in fleximode and made a number of pertinent observations (Leaker & Isbell 1986). They stressed the importance of planning and preparation for fleximode in terms of choosing the right lecturers and subjects, preparing students and ensuring adequate study materials are available. The lecturer must be keen to introduce fleximode and be familiar with, and have confidence in, the supporting material. Ideally, lecturers should be involved in the preparation of any study materials used for fleximode. They felt that fleximode was possibly more suitable for the experienced student, and particularly useful for students with busy working lives: for example, those typically studying the real estate courses.

From their observations, Leaker and Isbell were cautious about possible cost-savings for the College when using fleximode. They also pointed out that it could initially lead to a higher workload for lecturers due to the need to familiarize themselves with a new method and new materials. In addition, there could be some changes in the lecturer-student relationship, with the lecturer spending less time on preparation, and in class, and more time in non-classroom activities. Class cohesion was likely to lessen, due to irregular attendance patterns.

In terms of the effect on students, Isbell and Leaker were unable to obtain hard data on retention rate except that it was 'about the same' as traditional face-to-face classes and that the younger students were more likely to 'drop-out'. They also suggested that students with reading difficulties could have a real problem. However, they believed that fleximode could be useful in encouraging good study habits and a greater degree of self-discipline on the part of the students. They were adamant about the importance of counselling students prior to beginning fleximode, the value of orientation sessions and students having free choice in terms of studying by fleximode. They also suggested that 25 students per group should be the absolute upper limit.

Some fleximode programmes were underway in Adelaide College of TAFE in 1989, mostly with fortnightly attendance by students using self-directed learning materials. Leaker (pers. comm., 1989) stated that they had received a mixed reaction from students, with the most positive reactions coming from the more competent students who enjoyed independent study. He believed that the success of fleximode depended on committed lecturers and the effective marketing of the delivery mode by the College. Furthermore the future of fleximode would depend on whether senior people were prepared to work diligently to overcome problems such as organization and mode of payment and whether fleximode could be justified on educational, rather than financial grounds. He himself believed that fleximode did have educational advantages, particularly in terms of encouraging students to take more responsibility for their own learning.

In 1987, Adelaide College also initiated a review of course-delivery modes and learning resources currently being used at the College. This review was carried out by Rae Blesing, Head of the TAFE Adult Migrant Education Service (Blesing 1987). Blesing appears to have based her findings on observation, discussion with teaching staff and background reading of the subject. There is some indication in the report that the primary reason for the review was to find ways to improve the cost-effectiveness of the college's teaching programme.

> *The study I undertook called for consideration of classroom teaching programmes, in the context of a gloomy financial situation and the need to look at greater cost-effectiveness, while maintaining educational integrity. Given that face-to-face tuition is relatively cost- intensive, it would be useful then to look for ways of maximizing the value of face-to-face sessions, as well as exploiting to the full the learning materials and resource support services of the college.* (Blesing 1987, p.4)

One of the proposed cost-saving measures was fleximode, which could both maximize the use of teaching materials as well as reducing salary expenditure through less face-to-face teaching. As the Adelaide College of TAFE is also the South Australian TAFE provider of distance education, use of these materials for on-campus students studying by fleximode could be a cost-saving measure. However, Blesing also makes the interesting observation that the fleximode programmes currently operating in the School of Business Studies were not using external studies material to the degree that was expected.

The reluctance by lecturers to use existing material appeared to stem from two factors: first, perceived deficiencies in available materials (out-of-date, inappropriate content, etc.); second, the use of materials that embodied someone else's approach to teaching. Blesing makes some suggestions to overcome such problems. First, if distance education materials were less structured, they would be more adaptable to different modes of instruction and less identifiable with a particular learning/teaching style. Blesing suggests the development of a resource package for each subject, consisting of a commercial textbook, a study guide, a list of assignments and some audio-visual aids. For subjects where the content is continually changing, such as computing, tourism and business studies, she suggests using desk-top publishing techniques and loose-leaf files for the materials. In common with Leaker and Isbell, Blesing believed that involving lecturers in the preparation of materials would promote wider usage, and thus more cost-effectiveness.

The other cost-saving aspect of fleximode is the reduction in classroom usage and face-to-face teaching time. The reduction in teaching time is optimized when well-prepared, existing learning materials are readily available. However, as Blesing so neatly puts it, '*offsetting (salaries) savings to some extent are the additional administration and record-keeping and marking of supervision of non-attendance projects/assignments*' (p. 7). This is one of the most controversial aspects of fleximode: an agreed-upon time and money allowance for lecturer's non face-to-face teaching time. One of the aims of the present project was to actually cost out some of the time involved in these tasks.

Even if fleximode does prove to be a more economical way of teaching, this must be weighed against educational effectiveness. Blesing also makes the point that fleximode is more readily justified educationally when considered as an enhanced option for distance education. Blesing cites a

study of distance-education students carried out by the Research Branch of the SA Department of TAFE during 1979-81, in which 60 to 70 percent of TAFE external studies students were found to be living in the metropolitan area and were most frequently enrolled thus in order to more easily fit in study with other commitments. Fleximode may prove preferable to distance education for such students.

Lecturers seemed of the opinion that mature, experienced people would be better candidates than younger adults for whom the option of traditional attendance patterns should remain where possible.

From Blesing's discussions with lecturers, it would seem a few were not convinced that fleximode had any educational advantages over traditional classroom-based delivery. However, the point is made that this really depends on the learner and/or the subject. Blesing certainly considers that teachers can gain professionally from a change in approach, from any inservicing which should precede the changes, and from the exposure to learning materials produced by others. Students are seen to benefit from several factors: the possibility of having more flexible classroom attendance; by becoming more independent and self-directed in their learning; and the enhanced possibility of linking learning to life or work experience. The Yalloum experience (Daye & Hanley 1987) previously discussed is an example of such benefits to staff and students.

Blesing also suggests that fleximode could be used most appropriately with four types of subjects: applied subjects; competency-based subjects; subjects which require individualized practice (e.g. languages); subjects where *'transmission of information is of major importance'* (p. 16), providing the opportunity is used for presenting the information in a variety of ways, e.g. video, audio tape, written and spoken material. All fleximode students should be given pre-enrolment counselling, orientation and on-going support.

Light College of TAFE

Light College of TAFE introduced fleximode as a component of the establishment of open learning at the College. A report was compiled by John Mitchell after the open learning mode had been operating for approximately one semester (Mitchell 1988).

There were both institutional and geographical reasons why Light College decided to try a more flexible system of course delivery. Light College has three campuses and a thinly spread population base with the key occupations - agriculture and viticulture -influenced by seasonal demand. In addition, the College wished to respond to student demands for more flexibility, and government calls to be more efficient and adaptive. Cost-effectiveness, therefore, was only one of a number of reasons for introducing change.

The College moved quickly. In February, 1988, enrolments in 'open learning' courses totalled 10,000 student hours; by September the total had increased to 24,650 student hours (31 courses, 735 students).

Although the open learning courses involved different degrees of student-teacher contact, some were specifically 'fleximode' subjects in that the students studied by themselves from a set of learning materials and attended 'tutorials' either weekly or fortnightly. (It is possibly a misnomer to use the term 'tutorial' in all cases because lecturers were only paid tutorial rates if little or no preparation was required by the tutor. The most common rate of payment was at the lecturer rate.) Fleximode subjects were either from real estate, business or rural studies courses. In addition to these fleximode subjects, tutorials (face-to-face or by telephone), were added to self-paced subjects, e.g. self-instruction and video tape courses. According to Mitchell (pers. comm., 1988) the College is now trying out various configurations of class contact and self-study.

Where possible, learning materials were obtained from other South Australian colleges, in particular, distance education materials from Adelaide College of TAFE. Light College developed their own only when nothing else was available. Light College staff have decided to use pre-existing materials where possible, and modify these where necessary to better suit local students. This would certainly improve the cost efficiency of fleximode, as preparation of materials is one of the biggest costs.

What is most interesting about the Light College approach to implementation is the theoretical stance adopted by Mitchell, the Deputy-Principal and the Chairperson of the Open Learning Sub-Committee. Mitchell appears to have been influenced by Greenfield's 'phenomenological' view that organizations are invented social reality, that is, *'organizations are made by people doing and, in that sense, are insubstantial. They are based on ideas, values and individual action ... Organizational change, then, requires more than structural change; it requires changes in the meanings and purposes that individuals learn'*. (Greenfield 1980).

To that end, staff were encouraged, but not coerced, into taking part, and roles and tasks were kept fluid for the staff to identify and develop.

> *In effect, I became involved in the human culture of Light College, establishing trust and rapport, repeating my value scheme so that people would understand my motives, and reassuring staff that they could choose just how they would contribute to the innovation.* (Mitchell 1988).

In addition, staff development was given a high priority, with many different activities taking place, including an interstate visit for some staff to observe open learning in Victoria. However, it is interesting to note that, in spite of this planning, the College did find that part-time staff were not sufficiently involved in this process. This was subsequently rectified in the second semester, indicating the College appeared to be continually evaluating and improving their programme.

The philosophy guiding the establishment of open learning is illustrated in Mitchell's report, which contains contributions from a number of different staff members and is sprinkled with positive comments about staff accomplishments.

Evaluation

Evaluation of all the open learning activities was on-going, by both formal and informal means, and from staff and students. Although students were asked to fill out a student response sheet at the completion of all open learning sub-

jects, comments rather than summative data are given in the report, and thus the overall reaction of students cannot be gauged. However, a case study of a full-time open learning student was quite informative. This student was male, 26 years old, enrolled in an Associate Diploma in Accounting and living in the Adelaide suburb of Gawler (thus a 'urban' rather than a 'country' student). He was doing external study subjects with Adelaide College of TAFE and open learning subjects with the Light College of TAFE. It is interesting that, although he preferred to work by himself, with class attendance kept to a minimum, he liked the idea of having enough structure to keep him motivated.

> *The problem I have with Adelaide College's external studies courses is that there are no set dates for assignments, and no tutorials; they rely too much on me getting all the assignments in. I can't fault the Adelaide College notes, they're well set out and you're told everything, but the direction is solely up to the student.*
>
> *I like Light College's Open Learning courses because I'm the sort of person who needs some structures, and I've liked the weekly or fortnightly tutorials. If I've got a tutorial coming up, I feel obligated to get my work up to date. I also find that if I go to a tutorial without doing any preparation, I may as well not turn up. So the tutorials keep me up to date* (Mitchell 1988, no page numbers given).

In the report the observation is also made that 'urban' students, particularly those around the largest campus, Gawler, were suspicious of the College's motives in introducing open learning whereas 'country' students appeared to be appreciative of being given the opportunity to study a range of new courses.

The Student Services Officer also reported on the needs and concerns of the students, and actions taken to rectify these. Some of these needs, such as comprehensive pre-enrolment counselling, subject orientation and on-going assistance (particularly in the area of study skills) have been mentioned previously. Other needs included were: a central contact person available especially in the evenings; ready availability of lectures; a quick turn around time for assignments and the need to feel included in the College and not on the periphery.

Costing

The total cost of establishing open learning at the College, generating 24,650 student hours, was around $15 500. (A 'normal' lecturer generates 800-12 000 student hours). Some of these costs are 'establishment' costs, so the costs will be lower in future years.

With the fleximode classes, it is reported that fleximode classes cost just over half the cost of conventional classes but detailed costing is not given. Personal communication with John Mitchell (1989) indicated that, although initially various arrangements were tried, finally an arrangement was reached that lecturers were paid for their class contact time at their usual teaching rate (unless the subject required no preparation time in which case the tutorial rate which is two-thirds of the teaching rate was paid). The extra marking and administration engendered by fleximode were paid according to subject area and number of students - each subject negotiated separately between John Mitchell and the lecturer involved. In most cases, part-time staff were hired, so the problem of what happens to the full-time teacher who has 'down-time' during the non-contact class time seldom occurred. With the one full-time teacher involved, a separate arrangement was made that was satisfactory to all concerned. Mitchell's philosophy seemed to be that lecturers should not be disadvantaged, but rewarded for trying out new methods of delivery because of the personal costs involved.

Mitchell has since been working in conjunction with the Adelaide College of TAFE to facilitate the use of communications technology in distance education, in particular, the trialling of live, two-way television between Adelaide College of TAFE and two campuses of the Light College of TAFE (Mitchell 1989). Using contemporary technology such as computers, interactive television and satellite transmission to facilitate learning, are important developments for fleximode and other similar programmes. Bowles (1987) argues this is essential and that microelectronic technology should be seen as an integral part of fleximode programmes.

Mitchell has reported that open learning has since been expanding at the Light College. In retrospect, he believes that perhaps the Light College moved too quickly when introducing open learning, and to have approached this more slowly may have been preferable (Mitchell, pers. comm., 1989).

Western Australia

The Western Australian TAFE system is principally a system where distance education and external studies are managed almost entirely from one college, TES (TAFE External Studies) College, while all other colleges provide traditional face-to-face teaching.

There is some evidence that this has not always been so. Although TES, (then known as the Technical Correspondence School), was originally founded in 1944 to offer correspondence tuition to members of the armed forces and then later, civilians, there was originally some degree of flexibility in the way in which courses were delivered. This included tutorials (some of which were held in the students' workplace), supervised study groups and practical training for country apprentices (Mears 1979).

As the College expanded and became more institutionalized, the degree of flexibility appears to have lessened. Practical training for country apprentices was held in the colleges and Technical Extension Services (TES) as it was now called, was geared more directly to correspondence teaching and the production of educational materials through its publishing arm, the Technical Publications Trust. Liaison visits were made by TES staff to country centres, but not directly for teaching purposes.

External study centres were established at regional colleges to administer TES courses but only at the Great Southern Regional College of TAFE was provision made for external students to join existing face-to-face classes or take part in tutorial groups.

In November 1984, the College indicated that the intention to become involved in the use of a variety of teaching and

learning strategies (Technical Extension Service College Plan, 1985-87 Triennium). This included the development of mobile teaching resources, educational television programmes and computer-assisted learning programmes. Mention was also made of providing interactive contact with students by means of interviews, telephone calls and teleconferences, audio tapes, intensive training sessions and liaison visits. Farren (Principal of TES) also wrote on the need for new methodologies in education and training (Farren 1985).

The main impetus, however, to diversify course delivery in WA TAFE seems to have occurred in 1986, when the Corporate Plan for the WA TAFE system for the period from 1986-88 was developed (Technical & Further Education 1986). One of the objectives ('function' is the term used) in the Corporate Plan was to make TAFE available to the community through a variety of access models (Function 3).

Sub-objectives within Function 3 specified the introduction of 'mixed-mode' education for regional colleges and 'for metropolitan students at a college other than Technical Extension Service'. Arising out of this corporate plan, a Working Party in August 1987, recommended the introduction of 'open learning' within the WA TAFE system, with open learning characterized rather generally as providing students with access to as many of the available TAFE resources as possible, including class attendance (Technical & Further Education 1987).

A number of initiatives arose from this. TES developed a number of 'open learning' packages, that is, self-teaching programmes of study in different study areas. These were distributed to each of the colleges, but do not appear to have been widely used. Another initiative introduced by TES was the introduction of fleximode for one subject (Communications 1A) at a metropolitan college of TAFE in Semester 1, 1988, and continuing with Communications 1B in Semester 2, 1988. The lecturer involved volunteered and was very experienced in the subject area but had no background in fleximode delivery. Subject delivery was also very structured, with a double class split into two groups, and the lecturer saw each group every alternative week for two hours. As the usual class contact time was two hours each week, students were thus given half the usual class contact time. Study material that had been developed for external studies was used, and the lecturer was given a time allowance of one hour per week to compensate for the processing of extra assignments which the students completed during their non-contact weeks. Personal communication with the lecturer involved indicated that, although the programme was enjoyable and the lecturer became quite enthusiastic about fleximode, the time allowance for marking assignments was inadequate. Students' results were comparable with other classes. Although the lecturer would have liked to continue fleximode for this subject in 1989, this was not possible because the curriculum for the Communication units was revised and external studies materials were not available for the revised course.

Another result of Function 3 objectives from the 1986-88 Corporate Plan was the suggestion that the Curriculum Research and Development Unit of TAFE design a research project to identify costs, benefits and methodologies relevant to broadening the range of mixed mode study options and report on this project in 1988 (Technical and Further Education 1986, p. 41). A survey of the literature was carried out by this unit but significant work did not commence until late in 1988 when the Western Australian Office of TAFE received a TAFE National Research Centre grant for funding this project.

This, therefore, was the origin of the present research project, the objectives of which were:

- to investigate different configurations of fleximode delivery that may be appropriate for selected TAFE subjects;
- to develop programmes of fleximode delivery for trial in TAFE;
- to compare the cost and effectiveness of fleximode delivery with traditional delivery;
- to identify organisational and administrative problems associated with fleximode delivery in TAFE.

3

PROJECT METHODOLOGY

During the latter part of 1988, a number of fleximode research projects were identified to be undertaken in Semester 1, 1989 and evaluated in terms of costs and benefits.

The process of identification of these projects came about in three main ways:

- talking to staff in all the various colleges (including TES) about alternative delivery modes they were already using and were interested in using;
- examining TAFE reports and/or documentation that described the use of alternative delivery modes in the WA TAFE system;
- contacting all study area leaders within the WA TAFE system and asking them to identify where fleximode was taking place or could be taking place.

Six projects were selected for fleximode delivery for the first semester, 1989. Four of these programmes were delivered as variations from traditional face-to-face delivery, that is, an off-campus component was added to what was usually solely on-campus delivery. These programmes were:

- Accounting 1A
- Two subjects, Play and Learning 1 and Language 2 from the Associate Diploma of Social Science (Child Care)
- Motorcycle Mechanic Apprenticeship Stage 2A
- Petrol Fuel Injection

Two other programmes which had been adapted from correspondence delivery were also studied. These were:

- One subject, Aeroplane Performance and Operation 2 from the Commercial Pilot Licence Stage 1
- One subject, Municipal Practice C Part 1 from the Diploma of Local Government.

Method

The types of comparisons carried out between these fleximode programmes and the traditional modes of delivery are summarised in Figures 3.1 and 3.2. In all programmes except one, students final results are reported and comparisons of retention rates made where possible. Costs of delivering the programmes by fleximode were compared to the costs of the traditional modes of delivery.

Course	Subjects	Type of Delivery	Course Materials	Comparisons
Various	Accounting 1A	Self-study by students Assignments Face-to-face lectures of 4 hours every second week	TES course materials and teacher's lecture notes	Students' retention rate Exam results Teacher's perceptions Students' perceptions Financial costs
Associate Diploma of Child Care	Play and Learning 1 Language 2	Self-study by students Assignments Section booklet answers 4 tutorials (2 hours for each subject)	Off-campus and on-campus study materials developed by Community Care lecturers.	Exam results Teacher's perceptions Students' perceptions Financial costs
Apprenticeship in Motorcycle Mechanics	Motorcycle Mechanic Apprentice Stage 2A	Self-study by students from Lesson Book. 9 Lesson topics completed by students 4 day practical	Off-campus study materials developed by a TAFE college lecturer Practical sessions prepared by college lecturers	Exam results Teacher's perceptions Students' perceptions Financial costs
Automotive Trades Post-trade course	Petrol Fuel Injection	Self-study by students from Study Guide Completion of 6 assignments from Study Guide 2 day practical	Off-campus study materials developed by a TAFE college lecturer. Practical sessions prepared by lecturer.	Exam results Teacher's perceptions Students' perceptions Financial costs

Figure 3.1
Fleximode programmes 1989 variations from on-campus delivery

Course	Subjects	Type Of Delivery	Course Materials	Comparisons
Air Pilot Training Course: Commercial Licence	Aeroplane Performance and Operation 2	Self-study by students External Studies assignments Three tutorials of 2 hours duration	TES course material modified by lecturer	Teacher's perceptions Financial costs
Local Government Diploma	Municipal Practice C Part 1	30 hours face-to-face intensive course 3 assignments	Course materials prepared by TES lecturer	Exam results Teacher's perceptions Students' perceptions Financial costs

Figure 3.2
Fleximode programmes 1989 variations from correspondence delivery

In addition, information was obtained from staff and students about whether they perceived the mode of delivery to be effective, as well as possible problems and solutions to problems encountered.

In order to do this, information was obtained about:

- satisfaction with presentation of material;
- advantages and disadvantages compared to other delivery modes;
- students' understanding of subject material;
- congruency with students' preferred mode of study;
- congruency with students' personal and work demands;
- adequacy of remuneration received by lecturer for work carried out.

The six fleximode programmes were delivered during the first semester of 1989. During this time, contact was made with the lecturers involved concerning their programmes: observations were made of the on-campus component of some of the programmes and interviews were conducted by telephone with students who withdrew from the Accounting 1A evening classes. Questionnaires and/or interviews with staff and students were also administered and students' results collated.

The results of each of these programmes will be described in the following four chapters, after a description of the instruments developed for the study.

Instruments Developed for the Study

In order to carry out the comparisons planned for the fleximode rogrammes, the following instruments were developed:

- an interview schedule to interview students who withdrew from Accounting 1A classes before the end of the semester (Appendix 1).

  a questionnaire to direct students' perceptions of their fleximode ourse (Appendix 2 contains that given to the Child Care students).

- an interview schedule to measure lecturers' perceptions of their leximode course (Appendix 3).

Withdrawers' Interview Schedule

This interview schedule (Appendix 1) was designed to be administered by telephone to students who withdrew from classes before completing Accounting 1A. Initially the student was asked if he/she intended to continue with the subject and, if the answer was in the affirmative, the interview was discontinued. Of those who were withdrawing permanently, the interviewer sought to ascertain when the student withdrew, why he/she withdrew and his/her main reasons for enrolling in the subject.

Students were also asked to rate the importance of eight specific factors on their decision to withdraw. These eight factors were selected as most relevant to the present study from a more comprehensive list of factors used in a previous study of student attrition (Parkinson, Hayton & Strachan 1987).

In addition, details of academic background, present employment and whether English was their first language were also sought, as possible factors influencing the students' ability to cope with the study. All students were invited to make suggestions for improving Accounting 1A.

Students studying Accounting 1A by fleximode were asked some questions relevant to this, specifically, why they chose the fleximode class and how much they knew about the organization of the class before they started.

Students' Questionnaire Schedule

The student questionnaire was designed so there was a basic core of the same questions asked of all students. With each subject however, there were questions specific to that subject. This was necessary because of the variation between the various subjects.

All students were asked to make comparisons between study by fleximode and study using other modes of delivery, that is, traditional classes and correspondence. They were also all asked whether they would choose fleximode again if it remained on offer.

In addition, students were asked to complete rating scales on:

- the importance of various advantages of fleximode delivery;
- the organization of the fleximode class;
- the degree of difficulty the student had in understanding class content;
- the reasons why the student was studying the subject;
- the degree of difficulty students had attending classes;
- the effectiveness for the student of a number of different modes of learning.

Background details of the student, such as age, gender, previous academic experiences, employment and family details, were also sought, and, again, they were invited to make any additional comments about the subject and/or the delivery mode.

Questions specific to the various subjects were added if requested by the study area or lecturer. The responses to these questions will be discussed only if they appear to be relevant to the report.

Lecturers' Interview Schedule

The interview schedule for the lecturers also asked them to compare fleximode subject delivery with traditional classroom teaching and correspondence teaching. They were also asked to give details about the attendance pattern of the students, resources used, the reasons for introducing fleximode and the means of payment for fleximode delivery. Perceptions as to whether lecturers believed the mode of payment to be equitable were also sought, as well as their willingness to again teach by fleximode.

Other topics covered in the interview included lecturers' perceptions about which students and subject matter were most suited to fleximode delivery, recommendations for fleximode delivery for the subject taught, and the use of fleximode across the TAFE system generally. Lecturers were also invited to make general comments about their experiences with fleximode, or fleximode in general.

Comparison of Costs

For most of the programmes, comparisons were made between the costs of the delivery modes: correspondence, traditional face-to-face classes and fleximode. A schedule for comparisons was drawn up (Table 3.3). The various factors on which the overall costs were based were:

- on-campus teaching;
- off-campus teaching;
- preparation and production of course materials;
- contingency costs per student;
- classroom provision.

On-Campus Teaching

The teaching rate for TAFE lecturers in this costing exercise was set at $29.94 an hour, which is the part-time teaching rate for full-time lecturers on WA Level 14, the highest rate for four-year trained teachers (as effective from February, 23, 1990). This includes a loading for DOTT (Duties other than teaching). In WA TAFE colleges, full-time lecturers are usually on duty for 36 weeks for 30 hours per week, of which 22 hours is expected to be spent 'teaching' and 8 hours DOTT. During DOTT time the lecturer is expected to perform tasks such as preparing teaching materials, marking students' work, performing routine administration, consulting other staff and being available for students.

Off-Campus Teaching

Off-campus teaching includes the processing of assignment work and other such 'teaching' performed off-campus by correspondence teachers, as well as the 'extra' marking of assignments incurred by fleximode. Full-time lecturers at TES are expected to take approximately 35 minutes to mark an average assignment. Since correspondence lecturers work under conditions similar to other college lecturers each assignment therefore costs $17.47.

However, the part-time rate for marking external studies assignments is much lower than this, varying according to subject. The modal rate quoted by TES administrative staff is $9 an assignment, regardless of a lecturer's full-time salary level, and this is considerably lower than the full-time rate quoted above. The problem appears to be that, although TES lecturers are employed under the same conditions as other college lecturers, they do not have the same distribution, or type, of duties. Some lecturers spend a varying proportion of their time in educational development work, that is, preparing external studies materials, an activity which commercially can command quite a high rate of pay. For teaching (usually marking) there is the usual 22:8 ratio of teaching to DOTT but educational development work has no DOTT time attached. For example, a lecturer with 30 hours duty time may teach for 11 hours, have 4 hours DOTT and spend 16 hours on educational development work. In addition, as assignments do not come in at a regular rate, the balance between educational development work and teaching work varies week by week and lecturer by lecturer.

Another difficulty that arises in costing correspondence delivery is that, unlike classroom-based teaching, the costing is influenced by the number of assignments returned by students. Discussion with TES staff revealed that, just as not all students attend classes, not all correspondence students return all assignments: they usually return about seven out of ten, unless the assignments contribute in some way to the overall score.

It was therefore decided that the part-time rate for assignment marking, (usually $9 per assignment) with 35 minutes allowed for each assignment, will be adopted for estimating the costs of correspondence teaching by TES lecturers. This allows for some of these discrepancies. Using these figures, the usual hourly rate for correspondence teaching by TES lecturers was estimated at $15.43.

As will be discussed later, the lecturers teaching in the fleximode projects in this report were not always paid at these rates for their off-campus teaching, so the off-campus teaching rate will vary across projects.

Resource Materials

This was also quite difficult to cost because it depends so much on the individual subject being taught. If there was an actual cost involved for a particular programme, it was used in the cost comparisons. However, for two subjects (Accounting 1A and Municipal Practice C Part 1) for which the costing of a TES package was required, accurate costings were not available because these are old packages, and precise costings were not kept. Therefore discussions were held with TES administrative staff and approximate costs for similar subjects were obtained. Usually a TES package contains 10 sections of study so an average costing is as follows:

Cost Components	Method of Costing
On-campus teaching	$29.94 per hour (the part-time teaching rate for full-time four year trained teachers)
Off-campus teaching	Rate depends on the programme. This can be: a) $29.94 per hour (as for on-campus teaching) b) $9 an assignment which equals $15.43 per hour (modal TES rates) c) Rate decided upon by the College
Teaching resource materials	Costs are either a) $14.62 per student (TES - see text for explanation) b) Actual costs incurred in the individual programme
Contingency costs per student	For all colleges except TES these are set by TAFE's finance department on advice from lecturers. TES costs were estimated (see text)
Classroom provision	$30 per half day or evening; $60 per day

Table 3.3

Schedule used to compare costs between face-to-face teaching, correspondence and fleximode delivery

Course writing: 130 hours x 29.94 per hour	$3 892.20
Instructional design and preliminary edit: 40 hours x $29.94 an hour	$1 197.60
Editing, author proof and co-ordinating checks: 20 hours x $29.94 an hour	$ 598.80
Typing: 112.5 hours x $12.63 an hour	$1 420.88
Art work: 75 hours x $15.40 an hour	$1 155.00
TOTAL	$8 264.48

An external studies package has a life span of five years, therefore the initial production costs were divided by five, resulting in the cost of $1 652.90 per year. It is, however, more difficult to estimate costs per student, as student enrolments vary greatly. For Accounting 1A, for example, 691 students were enrolled during 1989 whereas only 25 students were enrolled in Municipal Practice C Part 1 (three by correspondence and the remainder by fleximode). If the costs of the package are divided by the number of students, the cost per student is $2.39 for Accounting 1A and $66.12 for Municipal Practice C Part 1 (if all studied by correspondence). However, if the cost of the two packages ($3 305.80) is divided by the total number of students for both subjects (716 students) the average cost is $4.62 per student. If printing costs of approximately $10 are added to this, the resulting cost per student is $14.62. This figure is an overestimation rather than an underestimation as many of the initial costs are recouped by selling the materials to students at other colleges.

Contingency Costs Per Student

Contingency costs for subjects taught in all TAFE WA Colleges (except TES) are calculated by the study area when preparing the subject syllabus and include costs for materials, photocopying, etc. The average cost for a 'chalk and talk' subject is $6.18 (February 1990). Student retention is also allowed for in these costs.

With fleximode, contingency costs were estimated by adding any postage costs to a proportion of the usual contingency costs for that particular subject. The proportion consisted of fleximode-attendance days divided by the traditional class-attendance days, for example, Accounting 1A fleximode contingency costs were costed at $\frac{34}{68}$ x $6.18 per student with no extra postage costs.

No separate contingency costs for the subjects taught by TES could be supplied by the finance section of WA TAFE this figure therefore had to be calculated for the purpose of the report. Such costs have to include an allowance for items such as photocopying, postage, telephone calls and library loans. As an example, the contingency costs per student enrolled in Accounting 1A were set at $6.26, based on the following costs:

Postage for initial external studies package	$ 1.15
Postage of 11 lessons at 41c a lesson	$ 4.51
Paper, photocopying, one telephone call	$ 0.60
Total:	$ 6.26

This again is an approximation only as no actual figures could be supplied.

Classroom Provision

It was difficult to find some way of comparing the capital costs of resources (other than teaching materials). All methods require accommodation for lecturers (usually more spacious for correspondence lecturers) and an administrative infrastructure. The traditional class-based method of teaching also requires the regular use of a classroom (usually once a week), fleximode delivery requires a classroom less often and, for correspondence teaching, no classroom at all is required. Therefore comparisons between methods were made on classroom use only.

There are various ways this could have been done, for example, depreciation costs of the building and fittings, costs of running expenses, loss of interest on income used to build the classroom. The results from two of these methods were examined before deciding which was more appropriate. The first method involved using the amortization costs of a classroom. New classrooms are presently being built at a college at the cost of $115 000 per classroom (including site costs and provision of toilets). After furnishing, approximate total costs are estimated at $120 000. The amortization cost of a classroom costing $120 000 over 40 years at an interest rate of 5 percent per annum is as follows:

$$\frac{120\,000\,x\,(1.1)^{40}\,x\,(0.5)}{(1.1)^{40}-1} = \$6\,135.66$$

For one semester the cost would be half of this ($3 067.83). If there were five class groups using this room for one semester, costs per class group would be $613.57. In addition to this, there are some operating costs, for example, electricity, which would perhaps add $5 to $6 per semester to the costs.

However, another simpler method to cost classroom use is to use 'loss of opportunity' income, that is, the cost that TAFE could have recovered by the hiring out of the classroom. Although the hire of a classroom by private providers is approximately $60 for a half-day or evening or $100 a day, it was decided to set a lower figure, as TAFE classrooms, although fully utilized by colleges, are not in great demand by other organizations. However, TES College is renting a classroom from another college at $10 an hour, that is, approximately $30 for a half-day or an evening and $60 a day. For an evening class attending for one semester, costs would therefore be $510, slightly less than the amortization costs. This would include running costs.

It was therefore decided to use 'loss of opportunity' costs in the comparisons of delivery modes, although this is a slightly more conservative figure compared with amortization costs.

4

ACCOUNTING 1A

Accounting 1A is a subject taught in a number of different courses within TAFE, and is basically an introduction to accountancy. It was selected as a fleximode subject primarily because it had the highest student enrolment among the award course subjects for 1987 (4 070 students), theoretically making it easier to find a group of students willing to take the subject by fleximode, and thus introducing the component of choice missing from the other subjects. In addition, external studies material was currently available.

As it happened, it was more difficult than anticipated to find a college willing to take part in the programme. Six colleges which had suitable student numbers were approached but not one of these had staff who were interested in taking part in the programme. Finally, after some negotiation, one college and a teacher volunteered only a day or so prior to enrolment day, leaving insufficient time to fully advise students (and teachers enrolling students) as to what fleximode delivery actually entailed.

Programme Delivery

A lecturer from TES volunteered to teach the subject by fleximode at the college on a part-time basis. Although this lecturer was experienced in teaching Accounting 1A by the traditional classroom method, this was the first year of being employed at TES and involved with off-campus teaching and fleximode. The college, however, had been previously involved in the fleximode Communications programme. Staff development was minimal, consisting of discussions with the author of this report about what other lecturers had found helpful and reading the staff development notes prepared by Scorgie and Smith (1986). Although it was suggested that this lecturer speak to other lecturers who had used fleximode delivery, this did not eventuate.

The external studies package that had been developed by TES for distance education was used. It consisted of a study guide, lesson materials and an associated textbook. Unfortunately this was an old package and the textbook used was different from that recommended for on- campus teaching and, in the opinion of the lecturer involved, not as up-to-date.

For this subject, if taught by evening classes, students are required to attend four hours a night every week for a semester and complete two tests and an internal exam. For fleximode delivery of this subject, it was decided to give students half the normal class time, that is, they would attend for four hours every second week. Two fleximode classes were therefore planned, with the lecturer attending every week but each class every alternate week.

During the on-campus time, the lecturer planned to teach certain topics and discuss topics students had been required to study by themselves from the study guides. Since the internal students did tests during class time, it was decided that, with the fleximode class, these would be substituted by two assignments, one of which would be a take-home exam.

Evaluation

Accounting 1A was evaluated in three different ways:

- comparison between the fleximode class and the three other evening classes at the same TAFE college in terms of retention rate, reasons for withdrawing from class and exam results;
- costs of teaching a fleximode class compared to traditional face- to-face and correspondence teaching of the same class;
- comparisons between fleximode and other modes of delivery, by the fleximode students and the class lecturer.

Student Outcomes

Table 4.1 lists the four evening classes in Accounting 1A, in terms of retention rate and exam results. The fleximode class was the largest, starting with 36 students. The intention was that this was to be a double class, and each half of the class would be attending on alternate weeks. Student numbers in the other traditional classes (to be termed A, B and C) were 29, 23 and 21 respectively.

Factors such as mid-term retention rates, numbers who presented for the examination, passed exam ratio and exam grades were not significantly different for the four groups.

	Fleximode Class	Traditional Classes		
		A	B	C
Original N[a]	36	29	23	21
Still Attending 30/4/89				
N	24	15	15	12
Percent of Original N	67%	52%	65%	57%
Sat for Exam				
N	22	12	14	9 n.s.
Percent of Original N	63%	41%	61%	43%
Final Results				
x	76.23	73.58	80.57	78.78 n.s
s.d.	17.86	15.82	20.74	15.02

Table 4.1

Retention rate and final results of the Accounting 1A classes

a This is based on the number of students who actually began classes. Students who enrolled but did not attend any classes were not included

Reasons for Withdrawal

Table 4.2 indicates the number of students still attending class in the week ending April 30th, 1989, approximately half the way through the 17-week semester course. All withdrawn students were sent a letter requesting an interview and approximately a week later were telephoned. Four students refused to be interviewed, and four students could not be contacted. The participation was not significantly different between the four groups.

	Fleximode Class	Traditional Classes		
		A	B	C
Original N	36	29	23	21
Withdrawn 30/4/89				
N	12	14	8	9
% of Original N	33%	48%	35%	43%
N interviewed	10	9	8	8
% Response	83%	64%	100%	89%

Table 4.2

Number of students who withdrew from classes and interview response rate

The four groups were first examined for possible differences in background characteristics, as these could affect reasons given for withdrawal (Table 4.3). Although both numbers and percentages are given to facilitate comparisons, the numbers, especially in the fleximode class, are very small.

There was a tendency for a lower proportion of students in the traditional classes to have attempted no further study since leaving school: 14 percent in the fleximode class (one student) compared to 43 percent of the traditional classes. However, to balance this, the majority of students (five students out of seven students) in the fleximode class left school in Year 10 or earlier, compared to 53 percent of the students in the traditional classes. It was concluded that the four groups had similar background characteristics.

Students also tended to enrol in Accounting 1A for similar reasons (Table 4.4). Most students wished to improve skills in the existing job, or to improve job prospects, or both. Only one student was studying in order to go on to further study.

Students were asked in two ways about reasons for withdrawing from the course. First they were asked an open-ended question: "Why did you withdraw?" and the response was later coded according to the categories listed in Table 4.5. Students were also asked to rate the importance of eight specific factors on their decision to withdraw. These eight factors were selected as most relevant to the present study from a more comprehensive list of factors used in a previous study of student attrition (Parkinson, Hayton & Strahan 1987). Results of the open-ended question can be seen in Table 4.5 and the rating of factors in Table 4.6.

Results from Table 4.5 suggest that the method of delivery may have been influential in the decision of students in the fleximode class to withdraw. Similar proportions of students from the fleximode class and the traditional classes mentioned problems associated with their employment, for example, feeling tired after working all day or conflicts between work demands and the demands of attending class and/or studying between classes. However, this was the sole reason for only two of the fleximode students. Four of the fleximode students mentioned reasons associated with the teaching methods used or the teacher, compared with only five students (18 percent) in the traditional classes. Of these latter students, four students perceived the problem lay with the teacher, rather than the teaching method. In contrast, three of the four fleximode students mentioned problems associated with the fleximode method of delivery: either it required too much self-discipline, or they needed more teaching time to explain the subject matter adequately. Only one of the students believed the sole problem was that the teacher had not been helpful enough, but this student also withdrew because the subject matter of the course was too difficult. Another two students in the fleximode class

Class Characteristics	Fleximode Class (N=12)		Traditional Classes (N=31)				
						Total	
	N	%	A	B	C	N	%
Gender:							
Male	5	42%	6	3	5	14	45%
Female	7	58%	8	5	4	17	55%
Age:							
18 to 20 years	2	17%	5	0	2	7	23%
20 to 29 years	6	50%	6	5	3	14	45%
More than 30 years	4	33%	3	3	3	9	13%
Unknown	0	0%	0	0	1	1	3%
Level Left School:[a]							
Before Year 10	1	14%	1	1	0	2	7%
Year 10	4	57%	6	4	3	13	46%
Year 11	0	0%	3	2	3	8	29%
Year 12	2	29%	2	1	2	5	18%
Other Studies:[a]							
Year 12 Secondary	0	0%	0	0	1	1	4%
Trade course	2	29%	1	3	1	5	18%
Other post-secondary	1	14%	2	1	2	5	18%
Tertiary course	1	14%	2	0	1	3	11%
Occupational Group:[a]							
Managers, Administrators	0	0%	0	0	1	1	4%
Professionals	0	0%	3	3	1	7	25%
Para-professionals	0	0%	0	0	1	1	4%
Tradespersons	3	43%	1	1	2	4	14%
Clerks	3	43%	6	2	2	10	36%
Salespersons, Personal Service	0	0%	2	0	0	2	7%
Plant and Machinery Operators/Drivers	1	14%	0	1	0	1	4%
Labourers and related workers	0	0%	0	1	0	1	4%
Not working	0	0%	0	0	1	1	4%

Table 4.3

Class groups by gender, age, level left school, other studies attempted or completed and occupational group

[a] This information was available from students interviewed only (N=28).

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Reasons for Enrolling	Fleximode Class		Traditional Classes				
	N	%	A	B	C	N	%
To improve skills in existing job	5	71%	8	5	4	17	61%
To improve job prospects	1	14%	3	3	2	8	29%
To improve skills in existing job and job prospects	1	14%	1	0	1	2	7%
To improve skills in existing job and go on to further study	0	0%	0	0	1	1	4%
Total N	7	100%	12	8	6	28	100%

Table 4.4

Reasons why students enrolled in the subject by class group

also found the subject material to be too difficult, making a total number of three students (43 percent) giving this as a reason, compared to five students (18 percent) in the traditional classes.

Turning to Table 4.6, which sets out the results of students' rating of given factors in their decision to withdraw, a similar trend emerges. Four of the seven students in the fleximode class rated study problems as important or very important (57 percent), compared to eight of the twenty eight students in the traditional classes (29 percent). There were no other differences between students in the fleximode classes and traditional classes in the way in which they rated the importance of other factors.

Reasons for Withdrawing [a]	Fleximode Class (N=7)		Traditional Classes A (N=12)	B (N=8)	C (N=8)	Total (N=28)	
	N	%				N	%
Employment demands/ tired after work	4	57%	6	3	5	14	50%
Teacher and/or teaching methods	4	57%	1	2	2	5	18%
Commitments - family, others (including unexpected events, full-time enrolment)	0	0%	4	2	3	9	32%
Subject matter too difficult	3	43%	3	1	1	5	18%
Study problems	1	14%	2	0	0	2	7%
Other: subject matter not as expected or not relevant, lack of guidance and counselling from college	1	14%	3	1	1	5	18%

Table 4.5

Reasons why students withdrew by class group

[a] Multiple response question therefore frequencies and percentages totals reflect this.

In conclusion it would seem that, although the students who withdrew from the fleximode class had similar background characteristics, and enrolled for similar reasons as the students in the traditional evening classes for Accounting 1A, there was a suggestion from the data that more than half of the seven fleximode students interviewed had problems associated with the mode of delivery.

Reasons	Fleximode Classes (N = 7)		Traditional Class A (N=28)	B (N=12)	C N=8	Total (N=8)	
	N	%				N	%
Study Problems:							
Very Important	3	43%	0	0	0	0	0%
Important	1	14%	4	1	3	8	29%
Not at all Important	3	43%	8	7	5	20	71%
Demands from family/home:							
Very Important	0	0%	2	1	0	3	11%
Important	0	0%	1	1	1	3	11%
Not at all Important	7	100%	9	6	7	22	79%
Employment Demands:							
Very Important	4	57%	3	3	4	10	36%
Important	1	14%	4	0	1	5	18%
Not at all Important	2	29%	5	5	3	13	46%
Other Personal Commitments:							
Very Important	0	0%	3	0	1	4	14%
Important	1	14%	0	2	0	2	7%
Not at all Important	6	86%	9	6	7	22	79%
The Teacher:							
Very Important	2	29%	0	2	1	3	11%
Important	0	0%	3	1	1	5	18%
Not at all Important	5	71%	9	5	6	20	71%
The Course Material:							
Very Important	2	29%	5	2	0	7	25%
Important	2	29%	1	1	1	3	11%
Not at all Important	3	43%	6	5	7	18	64%
The Course Itself:							
Very Important	2	29%	6	1	0	7	25%
Important	1	14%	1	1	0	2	7%
Not at all Important	4	57%	5	6	8	19	68%

Table 4.6

Rating of students of the importance of particular factors on reason for withdrawal by class group

Information about Fleximode

Students who studied by fleximode were also asked more details about the class: why they had enrolled, if they knew it was a fleximode class and how they understood the class was to be organized. Six of the seven students believed they had been given no choice as to whether they enrolled in a fleximode class or a traditional class. Only one student had been given advice by the counsellor to choose fleximode because he/she was a shiftworker, but this student was not given information on, or did not understand, how the class was to be organized. Two of the other students were not

Cost Components	Traditional Classes	Correspondence Teaching	Fleximode
On-campus Teaching	Lecturer costs: (68hours by $29.94) = $2 035.92	Nil	Lecturer costs: (34 hours x $29.94 hr) = $1 017.96
Off-campus Teaching	Nil	11 lessons x 29 [a] students x 35min per lesson = 187 hrs = $3 524.95 ($11per lesson [b] =18.85 per hour)	8 hours marking & administration $29.94 hour = $239.52
Teaching Resource Material	Preparation and production = Nil (Teachers' DOTT & contingency costs)	Preparation and production= 29 students x $14.26 = $413.54	Preparation and production =29 students x $14.62 = $423.98
Contingency Costs per Student	$6.18 x 29 students = $179.22	$6.26 x 29 students = $181.54	$\frac{34}{68}$ x $6.18 x 29 students = $89.61
Capital Costs of Classroom	Loss of opportunity costs: $30 x 17 evenings = $510	Nil	Loss of opportunity costs: $30 x 9 evenings = $270 (for one classroom for one half-semester)
TOTAL COSTS	$2 725.14	$4 120.03	$2 041.07
Costs Per Student	$93.97	$142.07	$70.38

TABLE 4.7
Comparative costs of delivering Accounting 1a by traditional classes, correspondence and fleximode

[a] Costs are based on one class of 29 students, the mean of the number who started (36) and the number (22) who completed the course.

[b] Accounting 1A is classified at Level 3A for which part-time lecturers receive $11 per lesson for marking.

even told it was a fleximode class until attending the first class. There appeared to be therefore, inadequate explanation given to the students about fleximode.

Comparison of Costs

Table 4.7 details comparative costs between the delivery of Accounting 1A by the three delivery modes. Costs are based on a group of 29 students, the mean of the number who started (36) and the number who completed (22) the course. This would be treated as one class within TAFE. The fleximode class was originally 36 students and treated as two classes. However, all the other Accounting 1A evening classes were originally less than 30. If fleximode had not been offered it is probable that some students would have been asked to enrol for a different night in order to even up the numbers.

As Table 4.7 demonstrates, fleximode delivery appears to be the most economical means of delivery ($70.38 per student), followed by traditional classes ($93.97) per student), then correspondence teaching ($142.07 per student).

A point to be kept in mind is that the traditional classroom method is geared towards teaching a 'group', and costs the same in terms of teaching and use of a classroom, with any number of students, provided the students can be taught as a group. However, with correspondence delivery, the teaching costs vary almost directly with the number of

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students. For example, if there were only 16 students (considered the lowest viable class size for most subjects taught in TAFE colleges), teaching costs for correspondence teaching of Accounting 1A would be $2 269.87, with no classroom costs, whereas the teaching and classroom costs for teaching one class by the traditional method would be $2 644.80. The cost of fleximode delivery can also be varied according to class numbers, by lessening the number of student contact hours. With lower student numbers, there would also be fewer assignments to mark.

Correspondence teaching costs also vary according to the student retention rate whereas, with traditional classroom-based teaching, the teacher still puts in the same amount of teaching time even if the class dwindles to half of the original number. For example, in the Accounting 1A classes studied, about one-third to one-half of the students did not complete the course. This is usual for first-year subjects taken by part-time students at TAFE. The retention rate for correspondence students taking similar subjects is even lower, approximately 45 percent to 48 percent, although actual figures have not been calculated by TES. Although the retention rate would not affect the costing for the traditional classes or fleximode for this subject, it would lessen the costs of correspondence as there would be less off-campus teaching and lower postage costs.

Students' Comparisons of Delivery Modes

All students who completed Accounting 1A by fleximode were asked to complete a questionnaire asking them to compare fleximode with correspondence delivery and face-to-face teaching delivery.

Only four students had had previous experience with correspondence and therefore responded to this question. All of these students believed that fleximode was preferable, either because of the teacher contact (two students), contact with a teacher and students (one student) or the balance provided between self-study and learning in a class situation '*the best of both worlds*' (one student). No student saw any disadvantage of fleximode compared with correspondence.

Fifteen of the twenty Accounting 1A students made comparisons between face-to-face delivery and fleximode delivery. Four of these students saw no advantages in fleximode at all. "*None really - you are more at a disadvantage if less time with actual teaching/learning*". Of the remaining eleven students, three students found the main advantage was being able to work at their own pace and in their own time. One of these students believed fleximode improved retention, "*You learn at your own pace and I think you learn more*". Seven students mentioned advantages which were associated with less or more flexible class attendance, thus allowing more time for family commitments or employment demands (two students), more flexibility (three students), and just less class attendance (two students). The other student found it was advantageous to have more time to work on assignments.

In terms of the difficulties of studying by fleximode in comparison with attending class every week, three students (those who had appreciated the flexibility of fleximode) believed there were none. Four students cited the need to be more organized, "*You tend to slack off*", "*Easier to delay study time*". Two students found it more difficult to find time to sit down and study at home, "*Other things usually take priority*". Four students cited problems in understanding the material due to reduced contact with the lecturer, for example, not enough time to master important concepts or clear up problems. One student in this group mentioned textbook errors which could not easily be identified by the student. Two students found the main disadvantage was having to work on your own.

It would appear from these results that the effectiveness of fleximode for students is an individual matter. Some like the freedom of working in their own time while others see this as a disadvantage.

Choice of Delivery

Students were also asked "If the college offered another subject by fleximode next year, would you choose fleximode again, traditional classes or correspondence?" and to rate the choices given from 1 to 3 in order of preference. Seven students gave their first choice only. However, the rating was even, with ten students choosing traditional classes and ten students choosing fleximode.

The six students who chose fleximode and completed the ratings, put classes second and correspondence third. Seven students chose classes first, fleximode second and correspondence third and one reversed the order of the latter two delivery modes. It appears from these results that fleximode or traditional classes are equally popular, with learning by correspondence the least popular.

Of the students who chose fleximode, eight gave reasons for their choice, and there was considerable variety. Five gave reasons associated with the flexibility of less class attendance and more self-study; one student preferred to "*Study and understand by myself*"; one student found it enabled him/her to take more subjects in a semester and the other student found it easier to fit in with shiftwork.

On the other hand, two of the nine students who gave reasons for choosing classes, found self-study did not lead to a better understanding: "*Does not always sink in when reading it from a book*". Six students mentioned the problem of organizing oneself to study at home: "*Difficulty in finding time at home to study and keep up with the family to look after*"; or, "*My own lack of self-discipline*"; "*I have better study patterns if attending classes weekly... I tend to be less interested as I'm not attending as often*". The remaining student had enjoyed studying Accounting 1A by fleximode but only because of some previous background knowledge. This student responded that "*I would only choose fleximode if I had some knowledge of the subject*".

Lecturer's Comparisons of Delivery Modes

The lecturer had previously taught Accounting 1A using traditional classroom methods and was currently teaching it by correspondence, therefore was able to make comparisons with both methods. The lecturer's perceptions about fleximode as compared to correspondence were similar to that of the students, in that fleximode was seen as the better method. One reason given was that teaching by fleximode was more satisfying for teacher and students because of the face-to-face contact. The lecturer also believed the students learnt better because they were able to obtain more immediate feedback about their difficulties and errors.

When fleximode was compared with traditional classes however,the lecturer saw no advantages for the teacher and limited usefulness for the students. More class time was spent teaching and much more time marking. It was also more difficult to build up a rapport with the students, or for the students to build up any rapport with each other. Further discussion with the lecturer revealed some of the reasons for these comments.

When the lecturer had previously taught Accounting 1A by the traditional classroom method, about half of the four-hour time slot each week had been spent in teaching or 'chalk and talk', and the rest of the time students were able to do practical work, ask questions and so on. When delivering the subject by fleximode, the lecturer reported that much more of the time in class was spent 'teaching'. As the students had not been in class for two weeks, time was first of all taken up with revising what had previously been covered to refresh the students' memories. Presenting the new material then took up most of the remaining time, although, if possible, time was left to answer questions and allow students to complete practical assignments. The lecturer admitted that he seemed to be trying to cover the entire course in half the time, rather than allotting certain sections for students to cover by themselves.

Reasons for this lay partly with the subject itself and the resources. Accounting 1A is the introductory subject and the student has to master a number of basic concepts. When the lecturer discovered, during the revision period in the early lessons, that the majority of students were not mastering these concepts by themselves, the necessity arose to 'teach' them in the traditional manner. This seems to indicate that either the self-study materials were not written well enough to allow students to master these concepts, or the students did not have adequate study skills or the motivation to do so. As the materials used by the student were written for teaching by correspondence, one would expect that they would be more than adequate for students who were also attending classes. However, comments by the teacher and the students indicated that the correspondence materials (principally the allocated textbook) did contain a number of errors and were in need of revision to bring them up-to-date. (This external studies package has since been replaced). The problem therefore may have been with the materials. An additional problem was also that the textbook was not available until two weeks into the course.

In addition, it could be conceivable that since Accounting 1A is an introductory subject, it is not ideally suited to either correspondence or fleximode and can be taught more effectively in the classroom situation. When this project was in the planning stage it was suggested by a senior TES lecturer that, if Accounting 1A were to be taught by fleximode, the students should be given an introductory period of 12 hours (three weeks of four hours) in which the lecturer could ensure that all the students understood the basic concepts before being asked to study by themselves. However, this did not fit the College timetable and therefore the system of attending every two weeks was adopted.

An additional problem with organizing attendence in such an inflexible way was that one group of students unfortunately lost three lessons, due to holidays and scheduling of exams. Although they were invited to attend on the alternative weeks, the pattern of attendance was disrupted and some had three to four weeks without teacher contact.

Another problem may have been that the course was not planned so that lecturer and students knew which parts were to be covered when, and by whom. Although the lecturer was very experienced in teaching Accounting 1A in the traditional manner, he had not developed a structure for teaching by fleximode. This points to the need for more adequate preparation of personnel for any fleximode delivery of subjects.

Suitability of Students and Subject Matter

The lecturer believed that fleximode was more suited for students with previous background knowledge of the subject. This agrees with the comment made by the student who had enjoyed studying Accounting 1A by fleximode but would not choose to study by fleximode again unless he/she already had previous background knowledge of the subject. The lecturer also thought fleximode was useful for students who are unable to attend class regularly.

He believed fleximode to be ideal for subjects which are not in high demand, and for which it is difficult to obtain a viable class. In addition it was also believed to be useful for subjects which require a high degree of rote learning, for example, laws and regulations. Such subjects are rather boring to present, even in a classroom situation, and could just as easily be mastered by students studying by themselves.

Mode of Payment

The lecturer was paid for the contact time at normal lecturing rates and an extra hour per week to cover the extra marking time involved. He did not believe this to be equitable and suggested the need for some formula based on the number of students and number of assignments.

Lecturer's Conclusions

In terms of the future of fleximode in the WA TAFE system, the lecturer believed it has great potential, but for selected subjects and students. He also made a number of recommendations. Students embarking on fleximode must be thoroughly briefed as to what is involved. The lecturer also needs to be thoroughly prepared, in terms of organization and material, and be able, at the beginning of the course, to give an outline to the students so they know what is required. Staff also need to be given more freedom regarding the structure and administration of the course, such as when the students attend, and how the course is assessed. For example, the lecturer would have preferred to allocate more marks for assignment work but the structure of the course did not actually allow this. In TAFE, where subjects are taught across a number of colleges, the way a subject is assessed is thoroughly spelt out because this is one of the means of maintaining similar standards across colleges. It is quite difficult to vary assessment procedures even when the student is internally assessed rather than given an external exam.

This lecturer would teach again by fleximode if asked to but only if the above recommendations were implemented.

5

ASSOCIATE DIPLOMA OF SOCIAL SCIENCE (CHILD CARE)

The Associate Diploma of Social Science (Child Care) is a course studied by those working or preparing to work in the child care field. The whole course normally takes five years part-time or two years full-time. The full-time course is typically studied by young adults who have only recently left school ('school-leavers') whereas the part-time course is normally undertaken by older adults already working in the child care field.

The course is delivered at two metropolitan colleges and three regional colleges. Students attending the metropolitan colleges can study only in the internal mode, whereas, at the regional colleges, both internal and external modes of study are available. The external course is essentially fleximode, with both an on-campus and an off-campus component.

The external course is unique to the WA TAFE system as part of the only external TAFE programme not conducted through TES. The reasons for this are mainly historical. The Associate Diploma was developed from a Child Care Certificate course conducted under the auspices of the Kindergarten Association of WA and delivered by internal and external mode from the old Kindergarten Training College. In 1977, the responsibility for training child care workers was transferred to TAFE but the training continued to be delivered from the same buildings. There was a move in 1982/83 to transfer the External Studies course to TES.

It is interesting to look at the reasons given by Community Care as to why a transfer to TES was rejected (Smith 1985). First, the courses differed significantly from the traditional TES external courses because they contained a combination of on-and off-campus teaching as well as field placements which had to be assessed by staff teaching the course. Second, Community Care wished to retain links between the internal and external courses in order to share resources, maintain course standards and make course-writing a co-operative venture between internal and external staff.

For the purpose of this project, two external programmes within the Associate Diploma were offered to metropolitan students. Normally such students are required to attend lectures at the college for four hours a night for two nights a week. As these students are also working full-time in child care, this is very demanding in terms of time and, according to Community Care staff, inefficient, as students are often tired, especially towards the end of the evening. Community Care staff believed that if some subjects could be offered by fleximode this could lessen students' attendance time and allow them to study at a time and place more convenient to them. As there was a greater student demand for the course than was currently being filled, there was also the possibility that student intake could be doubled if both a fleximode and a face-to-face class could be offered. However, this would depend on the number of organizations and centres available to provide practical placements for the students.

Programme Delivery

The Associate Diploma course as run in the external studies mode is very flexible and can be varied according to local needs and facilities. A number of different delivery modes are utilized, e.g. lectures, tutorials, workshops, study guide and assignments. For the two subjects selected (Play and Learning I and Language 2), students were given a study guide and assignments, an introductory session and four four-hour classes/tutorials (two hours for each subject) during the semester. The staff member chosen to deliver both subjects was also lecturing in one of the subjects to full-time day students and, although never having taught in distance education, had prepared one of the fleximode packages. This lecturer was given a staff development session by the leader of the Community Care External Studies team.

Evaluation

Fleximode delivery of this subject was assessed by:

- comparison of the exam results of the fleximode students with part-time evening students studying the same subjects in traditional classes in the previous year (there was no other comparable class studying these subjects in 1989);
- an interview with the teacher;
- administration of a questionnaire to students;
- assessment of the financial cost of the delivery;
- observation of, and discussion with, students during their on - campus time.

Student Outcomes

All students in both groups were females and either employed in day care centres or were family day care mothers. The mean age of students completing the questionnaire was 26 years for 1988 class and 29 years for the 1989 class. Five of the students in the latter group had families to care for.

There were originally thirteen students in the fleximode class but three students left in the first month, for reasons unassociated with the type of delivery. Reasons given were illness, a transfer to a different part of the State and a change in family commitments. The student who was too ill to continue actually spoke glowingly about the delivery mode during the only on-campus session she attended. By using the off-campus materials, she was able to continue to study for some time after becoming ill but finally had to withdraw.

As the 1988 class was only selected at the end of the year, the retention rate was unknown.

Not all students were present at the on-campus sessions but the lecturer was usually given reasons for non-attendance. These included illness, no babysitter, or a practical placement. Some students with family commitments came for part of the time, to pick up assignments and clear up problems.

All students completed the off-campus component of the course (six section booklets and two assignments for Play and Learning 1 and four section booklets and three assignments for Language 2). The lecturer was extremely impressed with the students' assignments and remarked that, for one particular major assignment, those submitted by this group were the best she had ever seen.

The students' final results (Table 5.1) were not significantly different from those of the students from the previous year which was pleasing for the staff who had regarded the 1988 class as a group of particularly high achievers.,

Subject: Type of Class	(N)	x̄	sd	Range High	Low
Play and Learning 1:					
1988 Traditional Class	(8)	79.75	3.87	85.0	73.0
1989 Fleximode Class	(10)	78.75	5.77	89.0	69.0
Language 2:					
1988 Traditional Class	(8)	74.63	5.52	80.0	65.0
1989 Fleximode Class	(10)	79.17	7.72	96.0	63.5

Table 5.1

Final results of the Child Care students: fleximode class and traditional class

Comparison of Costs

No cost comparisons were actually carried out for these subjects as there was no other correspondence course available for comparison. In addition, the lecturer was paid for the same amount of time when teaching by fleximode, as she would have received if she was teaching traditional classes. The teacher believed this was quite equitable, given the time spent processing the extra assignments. However, if the payment received by TES lecturers for the marking of correspondence subjects is applied, it could be argued she would have been underpaid.

For example, for Play and Learning 1, the course involves 25.5 on-campus hours and the marking of two major assignments. When teaching by fleximode, the lecturer had an introductory session of one hour and 4 two-hour classes (total = 9 hours). For the ten students, as well as the two major assignments, there were six study-guide assignments to mark. Using the TES marking allowance time of 35 minutes, the extra off-campus time therefore totalled 35 hours. If the on-campus and additional off-campus times are added, the total is 44 hours, which is 18.50 more hours than the on-campus time for traditional classes.

Language 2 has four assignments set for the correspondence section. If the rate of 35 minutes per assignment is used,the corresponding times for Language 2 are:

Traditional classes

On-campus time = 25.5 hours
(and 4 standard assignments)

Fleximode Classes:

On-campus time = 9 hours
(including 4 standard assignments)
Additional off-campus time = 23.33 hours
(4 assignments x 35 mins x 10 students)

Total = 32.33 hours

It is possible, however, that not all assignments, especially those required for Play and Learning 1, took as long as 35 minutes to mark.

It should also be noted that, although teaching costs were the same for the two programmes, capital costs were slightly less for fleximode as a classroom was used less often. However, fleximode delivery involved the cost of preparing the off-campus teaching materials. The same staff member was paid $400 on contract for preparing a set of teaching materials for another subject within the child care course. If these materials are used by 20 classes (4 groups of students - one metropolitan and three rural - over five years), the cost is $20per class per semester. Thus the extra cost of preparing resources appeared to be balanced by a lower usage of classroom and facilities.

Degree of Students' Satisfaction

Nine of the fleximode students and six students from the traditional class completed the questionnaire. The mean age of these two groups of students was 29 years (SD=6.75) and 26 years (SD= 8.46) respectively.

Students from both classes were asked to rate the extent of their satisfaction on the way the material was presented in both subjects and give some reasons for this. Satisfaction was rated as a scale from 1 'Very Dissatisfied' to 5 'Very Satisfied'. Ratings for both groups was similar (Table 5.2). Students in general seemed more satisfied with Play and Learning 1 than with Language 2 (which is the more theoretical subject). The number of students in each group was so small that extreme caution should be applied in interpreting results, but the fleximode class appeared to be more highly satisfied with Play and Learning 1 and the face-to-face class to be more satisfied with Language 2.

Subject: Type of Class	(N)	Extent of Satisfaction 1 (Very Dissatisfied)	2	3	4	5 (Very Satisfied)	Mean Rating
Play and Learning 1							
Traditional Class	(6)	0	0	2	3	1	3.83
Fleximode Class	(9)	0	0	2	4	3	4.11
Language 2							
Traditional Class	(6)	0	0	3	3	0	3.50
FleximodeClass	(9)	0	1	5	2	1	3.33

Table 5.2

Comparison of extent of satisfaction of fleximode class and face-to-face class with Child Care students

For both subjects, the most frequent student comments were the same regardless of the delivery mode. With Play and Learning 1, the most frequent positive comment from both groups was that the material was easy to understand and to put into practice. With Language 2, students most frequently enjoyed the practical aspects of the course. This involved assignments for the fleximode class and practical sessions and workshops for the traditional class. The most frequent negative comment from both groups about both subjects was the amount of work required.

Other comments by the students in the traditional class for Play and Learning 1 included the value of the class participation and the rapport that was built up between teacher and students. Altogether five students in the fleximode group would have preferred more teacher and class contact for either Play and Learning 1 (two students) or Language 2 (three students). A number of fleximode students found the material for Language 2 very difficult to understand and not as interesting as the material for Play and Learning 1.

Students' Comparisons of Delivery Modes

Only one student had previously studied by correspondence and therefore was able to make some comparisons between correspondence and fleximode delivery. According to this student, the main advantage of fleximode was that it allowed more teacher contact, and the main disadvantage was that there were time limits for submission of assignments.

All nine students completed the comparisons between fleximode and traditional classes. Less class attendance was the principal advantage of fleximode given by seven of these students, all of whom were working and five of whom had young children to care for. Comments included: *"Not having to find and pay a babysitter each week"; "Not having to rush my family in evenings to suit my needs". "Not tired when doing work in my own time. I am tired and take in only half as much when going to tech at night after working all day"*. The two other students believed that off-campus learning was more efficient: *"It involves more personal participation and more thinking and will undoubtedly remain"*.

The principal disadvantage of fleximode for five students was having to be more self-disciplined and well organized. *"It is hard to actually sit down and study at home. I prefer not having to come into class but disciplining myself was difficult"*. Another student not only found it difficult to find time but also to fit in with family demands. *"Difficulty in arranging time and place in my home to do my work without neglecting family or being distracted by them"*. The main disadvantage for two students was not having as much contact with the lecturer. One student found that fleximode seemed to involve more work and thus more of her time than attending a traditional class.

Choice of Delivery

All fleximode students put fleximode as their first choice if they were offered a choice of delivery the following year. Going to classes was the second choice for five students, and correspondence the second choice for four students.

The main convenience of fleximode for four students was that it fitted in more easily with family commitments, especially when they required a babysitter. Two students enjoyed the mix of class contact and self-study and two students found they *"took more information in"*, as they could choose when to study. The other student just said *"I would like to study by fleximode again"*.

Lecturer's Comparisons of Delivery Modes

The lecturer was quite enthusiastic about the concept of fleximode after using it for a semester even though she had little experience with any delivery mode other than traditional face-to-face teaching and was a little apprehensive at the start. Unlike Accounting 1A, the course was structured in such a way that the students covered most of the material by themselves - classes were used to discuss problems and assignments, to reinforce what they had already studied through another medium such as a video and film and to discuss and to practise applications of the course material. As the lecturer had previously taught the subjects in the traditional way to part-time evening students, and was currently teaching full-time day students, she was able to make some comparisons.

In particular, she found that, fleximode students tended to be more *"constructive with the way they used their classtime - use every minute of it"*. She also found it easier to discuss theoretical concepts as the students had previously studied it by themselves. In the traditional classes *"usually students confuse one another"*. The students' written communication skills improved with fleximode and the assignment work was of a high standard.

Compared with conventional teaching, fleximode delivery also encouraged students to make better use of their classtime and allowed them to use their own time with more flexibility. The main problem for the students, however, was that they had to become more self-disciplined.

The teacher also felt that the students were *"a little bit cheated"* since, with fewer classes, they had reduced access to lecturers who were people with wide experience in the field. Due to less frequent classes, she was also unable to give them the same direct feedback on problems that might arise during the course of work and study.

Another disadvantage was that the lecturer found it took longer to build up rapport with the students. Observation of the classes indicated that discussions did not 'flow' until towards the end of the semester. However, one positive aspect was that, as there were fewer classes, the lecturer was able to spend more time planning them.

In this case, also, the lecturer herself had written the fleximode version of the course. She had found it enabled her to conceptualize the total course in a way that she had not done previously. The lecturer also believed that the fleximode version of a course is a valuable resource for new lecturers and enables a team approach to course development and delivery.

Suitability of students and subjects

The lecturer considered that students with a higher level of written communication skills coped better with this type of delivery. This is a problem in a course such as child care where the student's ability to practise the skills taught is more important than being able to write fluently about them. This was particularly noticeable with one of the students in this course. This student was an extremely able caregiver but lacked the educational background to communicate what she was able to demonstrate. Students who are self-motivated and organized also cope better with fleximode.

Subjects which are concerned with attitudes, raising the level of consciousness, or personal growth would not be suitable for fleximode delivery, because the interaction between class members and the lecturer was an essential part of learning.

Lecturer's Conclusions

In terms of TAFE in general, the lecturer believed that fleximode enabled an increased responsiveness to students' needs and encouraged more innovative approaches to teaching. The teacher found she was able to use some of the techniques developed for fleximode delivery in the traditional class.

If more subjects within TAFE were to be delivered by fleximode, there would have to be adequate quality control to ensure that students were not disadvantaged by the lack of face-to-face contact as well as time to practise the skills needed. This would be especially important with subjects which have a high practical component, but it may be possible to make use of other resources, such as audio-visual materials.

In general, this lecturer would like to see more time given to preparation and piloting of fleximode courses, and the involvement of classroom teachers in this. There is certainly a spinoff for teachers to be involved in preparing such courses. The final comment was, "*'it has to be a good thing'*" She had enjoyed it and would be willing to try it again.

6

FLEXIMODE TRADE PROGRAMMES

Two of the Fleximode programmes offered were trade subjects - Stage 2A of the Apprenticeship in Motorcyle Mechanics and Petrol Fuel Injection which is a TAFE Certificate subject. These subjects are usually taught through on-campus classes only. Both fleximode programmes were delivered from the same college but suggested and developed by different lecturers. These lecturers also administered their programme, prepared the materials and did most of the teaching. As they also had experience with on- and off-campus teaching, little staff development appeared to be required. A short briefing session about fleximode was given by telephone and some written material about fleximode supplied.

Apprenticeship in Motorcycle Mechanics Stage 2A

In general, apprentices receive their training from TAFE through the on-campus mode. They attend a college for one day a week, or in two or three-week blocks (block release) each semester, depending on the trade. If students cannot attend a college, and block release is not offered in their trade, they can study by correspondence with TES and receive practical training in a two-week block at one of the colleges.

Although the latter type of training could be considered 'fleximode', as it combines on- and off-campus delivery, there is still the separation between off-campus learning conducted by TES and the on-campus learning conducted by a college. In addition, only country students are able to utilize this mode. If the student lives in the metropolitan area there is the expectation that he/she will attend a college unless the Director of Industrial Training agrees that correspondence training will be allowed. At present, no college conducts its own fleximode training of apprentices apart from that initiated for the present report.

The training programme for motorcycle mechanic apprentices consists of a common first year (Stages 1A and 1B) taught in conjunction with the motor mechanic apprentices, followed by two years (Stages 2A, 2B, 3A, 3B) specific to motorcycle mechanics. Each of these latter stages is taught in a 14-day block at the college and no correspondence course is available.

In 1988, small student numbers led to Stages 2 and 3 being run as a combined class, but, according to the lecturers in this area, resulted in a number of problems. A survey of the motorcycle industry was made in order to determine projected annual industry requirements for apprentices and concluded that enrolments would be approximately six for the next few years (Pitman 1988). The development of a fleximode course by the College was recommended, to be initiated when apprentice numbers are less than 12. This fleximode course was introduced in 1989 with Stage 2A apprentices, as part of the fleximode project.

Programme Delivery

The off-campus component was taught through nine correspondence lessons. Each lesson was sent into the college by a certain date and detailed written feedback given by the lecturer. The lecturer was also available by telephone for assistance. Completion of the off-campus lessons contributed to 50 per cent of the student's assessment for the course.

The on-campus component was planned for five days but, because of holidays, was only four days. It was run in a block at the end of the course and consisted of practical training with some revision of the theory previously studied off-campus. This component was delivered by various lecturers at the college. At the end of the course students were required to sit for theory and practical exams, which contributed the remaining 50 per cent of the assessment.

Resources

At the start of the course, students and employers were given a booklet containing all the course information. This included dates for completion of lessons and for the on-campus section of the course. There were nine correspondence lessons and a standard textbook which the students were required to purchase. Students were required to answer a series of questions for each of the lessons. The text for the lessons was written simply with diagrams and pictures used where possible. Students were also encouraged to seek assistance from other sources, for example, fellow workers, family and friends, workshop manuals and their college tutor.

Evaluation

The course was evaluated by interviewing the students and the teacher, examining the students' results and comparing costs between delivering the course by fleximode or the usual block release method. As there were only four students, they were interviewed rather than given a questionnaire.

Student Outcomes

The course began with six students, all of whom were male and under 20 years of age. Two students withdrew very early in the course, for reasons that did not appear to be associated with the mode of delivery. One student believed a Motor Mechanic Apprenticeship would be more appropriate and the other student left his employer and terminated his apprenticeship. The four remaining apprentices completed all lessons prior to the practical session, received a mean of 81.25 per cent on the practical and 61.88 per cent for the theory exam (Table 6.1). Final percentages were 57, 59, 72 and 73, resulting in a mean of 65.25 per cent, which appears to be lower than the mean result of the seven students who studied Stage 2A in 1988 (74.57) by the traditional block release method. Student numbers are, however, too small to test this statistically.

Comparison of Costs

As there was no correspondence course available for this subject, comparison of costs was carried out with the face-to-face class only. These details are set out in Table 6.2.

It appears that with four students it is much cheaper to offer the course by fleximode than by the traditional block release. However, as the number of students increases, the block release mode becomes more economical. It appears, therefore, that preparation of a fleximode course makes it possible for TAFE to deal with fluctuating numbers in small industry sectors in the most economical manner. When considering the costing it must also be recognized that the

	Off-campus Lessons	On-campus Practical	On-campus Theory	Final Percentage
Student 1	79.00	75.00	54.00	59.00
Student 2	94.00	85.00	67.50	73.00
Student 3	65.00	80.00	54.90	57.00
Student 4	78.00	85.00	71.10	72.00
$\bar{X}$	79.00	81.25	61.88	65.25

Table 6.1

Final percentage results of the Motorcycle Apprentice Stage 2A (fleximode)

lecturer was paid only $250 for preparing the fleximode course, which is a rather low sum for the amount of work involved. The lecturer estimated this actually took 80 hours, and was therefore paid only $3 per hour.

Degree of Students' Satisfaction

The students appeared to be quite satisfied with the off-campus component as all gave this a rating of '4' on the satisfaction scale of '1' 'Very dissatisfied' to '5' 'Very satisfied'. The reason why a '5' was not given appeared to be because some questions were seen as too *"vague"* or *"difficult to understand"* (two students). The other two students found it difficult to find time to work at home and to fit their study in around their other commitments.

Opinions differed as to what was the most positive aspect of the on-campus component. One student enjoyed the wide range of material covered, particularly as the assignments were written to encourage students to seek information from a number of different sources. Two students appreciated the flexibility of being able to study at home and the other student enjoyed developing responsibility for his own learning. *"You get marks for what you do"*.

Students' ratings of the on-campus part of the course were more varied, with one '5' or 'Very satisfied', one '4' and two '3s', the mid-rating. All students felt it was a little rushed (due to a Monday holiday, the time reduced from five to four days). They would have preferred more time. *"Two weeks"*, said one student.

Students differed over what was the most positive aspect of the on-campus component. The country student enjoyed it as 'it was like a holiday'. He liked talking to all the different teachers. Another student believed he learnt more by 'doing' rather than by reading the book and it was much more relaxed than work. Another student made a similar comment in that what he enjoyed most was *"picking up different practical tips"*, *"finding a better or a quicker way to do things"*. The other student was impressed with the effort made by the teachers to keep the course going. *"It makes you want to work for them"*.

Apart from suggesting the need for at least five days on-campus, two students suggested other ways of improving the course. One student would have preferred more revision of theory to be included with the practical, and the other student referred to a minor problem with the equipment available.

Students' Comparisons of Delivery Modes

No student had previously studied by correspondence therefore not one was able to make comparisons with fleximode. All made comparisons between fleximode and traditional classes, however. Three of the four students believed the quality of learning to be the main advantage of fleximode: *"When you have to look everything up for yourself you learn better"*, *"you remember it better by finding it out by yourself and writing it down"*. The fourth student saw the flexibility of being able to study by himself at home as the main advantage, but this student mentioned on another occasion that he felt he was learning more by finding out things for himself. It is interesting that these four students, the youngest of the groups studied for the present project, all men-

Cost Factors	Traditional Classes (Block Release)	Fleximode
On-campus teaching	Lecturer costs: 14 days x 8 hrs x $29.94 hr = 3 353.28	Lecturer costs: 5 days x 8 hrs x $29.94 hr = 1 197.60
Off-campus teaching	Nil	9 lessons x 30 mins x 4 students x $17 hr = $306
Teaching Resource Material	Nil (Allowed for in teacher's DOTT time and student's contingency costs)	Preparation costs = $250 Student's costs in one year = $50[a] Photocopying costs: 100 pages x 5c page = $5.00. Total cost $55.00 x 4 students = $220
Contingency costs per student	4 students x $136.69 a student = $546.76	On campus costs = 5[b] x 136.69 per 14 student x 4 students = $195.27 Postage = 12 lessons x 4 students x 41c = $19.68 Total: 215.25
Capital costs of classroom	Loss of opportunity costs: 14 days x $60 = $840	Loss of opportunity costs: 4 days x $60 = $300
TOTAL COSTS	$4 740.04	$2 238.85
Costs per student:	$1 185.01	$559.71

Table 6.2

Comparative costs of delivering Motorcycle Mechanics Stage 2A by traditional method and fleximode

a This is based on 4 students using the package each year over 5 yrs (Stage 2A is conducted only once a year).

b The proportion of $\frac{5}{14}$ was calculated by dividing the number of Fleximode on-campus days by the traditional number of on-campus days. It is possibly an under-estimation, as the college still had to provide a number of resources such as motorbikes for the students, even if they attended for only 5 days.

c This is an underestimation of the costs of hiring a workshop as the building and running costs are much higher than a classroom.

tioned that learning by themselves was such a rewarding experience.

Students' responses concerning the disadvantages of fleximode were more varied. They included: not finding enough time to work at home; not having the teacher available to answer questions; the short on-campus time and finding enough material to learn from. The latter was a real problem according to the lecturer but he did not want to limit the questions to material in the textbook. Having to look for sources of information was a good learning exercise for the students and would be advantageous when their course was completed. From talking to the students it appeared they used fellow workers as a resource, which seemed to be beneficial for all concerned. The lecturer reported that the other workers seemed to enjoy helping the students. It possibly also encouraged them to think more deeply about what they were doing, and the students were able to draw on the wealth of practical experience possessed by many of these tradespersons.

Choice of Delivery

All students chose fleximode as their first choice when asked to choose between fleximode, going to classes or studying by correspondence. All but one student put correspondence as their second choice, a different trend from that demonstrated by the other groups of students. Reasons given for fleximode emphasized its flexibility, *"Easier to fit in"* (three students), or the balance between theory and hands-on practical.

The choices made by the students appear to indicate that fleximode can be a viable alternative in a trade area, even when the students are young, have had no experience with correspondence study, and are working in a very practical trade. However, the lecturer did emphasize that motorcycle apprentices are usually 'special', and often more highly motivated than apprentices in other trade areas. Generalizing from the experience with these particular students to other trade areas therefore could be unwise.

It would also seem that, from comments made by the students, the lecturer himself worked extremely hard to make this project a success, and the students appreciated all his efforts.

Lecturer's Comparisons of Delivery Modes

The lecturer had been involved with teaching the practical component for correspondence courses (a two-week block) and was only able to compare this with fleximode. The only difference he noticed was that he had less time to cover the practical component with fleximode. He therefore encouraged the students to do more of their own practical investigations for some topics, but he observed that some of the other lecturers involved in the practical component tried to cover all topics as usual and it became a little rushed.

By comparison with conventional classes in other trade areas, he found that it was possible with fleximode to relate to each student as an individual and the emphasis was on the achievement of the individual student, rather than the class. He also believed that there were benefits for the employer, in that the student did much more of the study in his own time, was only released for a short block, and that as the student had to use the employer and his fellow workers as resources in the course of his study, there was closer co-ordination between work and study. The employer was given the opportunity to contribute to what the student was learning, as well as to possibly pick up a few tips from the material the student was studying.

The lecturer found the benefits for him were that his workload was more flexible and, for the college, it was certainly much cheaper than running a traditional class. The only difficulty was that some of the students found it difficult to express themselves in writing. However, he was usually able to understand what they were trying to communicate. It was also a useful learning experience for those students who were not confident about their written skills because they were given a chance to practise this in an area in which they were interested.

Students and Subjects Most Suited to Fleximode

The lecturer believed that the students who gained most from fleximode were the more motivated ones. They were able to push ahead at their own rate and were not as restricted as they would have been had they been in a traditional class situation. He also hypothesised that fleximode was probably easier for the students with higher levels of literacy. The one boy in the group who had completed the most years at secondary school seemed to cope more easily with the materials.

The lecturer also believes that there are no limitations to the subjects suited for fleximode delivery, as the delivery can be tailored to match the subject. For example, if a subject is very practical, it may be necessary to increase the practical component either on-campus or by some other means. There is also need to keep fleximode 'flexible' and only use it in those circumstances where it is appropriate. If students do not have high levels of literacy, for example, a travelling tutor may be more appropriate than fleximode.

Mode of Payment

As discussed, the lecturer was paid $250 for preparing the resources for the project, which he estimated took about 80 hours, resulting in the payment of approximately $3 an hour. For the on-campus time, the lecturer was paid at his normal pay rate. The off-campus marking was paid for at $17 per hour (supervisor rates). There were nine assignments for each student. Each took about 30 minutes on average to mark, making a total cost of $306. No extra time was allowed for the supervisory component, that is, sending out and collecting assignments, recording marks and so on, but the lecturer was satisfied with the payment he had received, principally because of his interest in the project. However, he was also concerned that he had set a precedent in that those who followed him would not have the same altruistic interest in the project and would not be so satisfied with the low monetary rewards. He therefore recommended that a fair rate of payment would have to be negotiated by TAFE staff for the preparation and delivery of fleximode subjects.

Lecturer's Conclusions

Although the lecturer believed that there was much potential for fleximode within TAFE, he also believed there were a number of issues that would have to be resolved. The primary one was the rate of payment. With trade subjects also, where the on-campus component was taught by a number of lecturers there would have to be more co-ordination as to how they were to cover the material in the practical

session. In accordance with what the students themselves suggested, the on-campus component should also be at least five days duration or appropriate to the material to be taught. In addition, as this was an apprenticeship course which the students had a commitment to attend, what would happen if a student failed to do his lessons? Would the student still be able to do the practical component? This problem can be overcome in the normal correspondence courses which have a two-week block in which a student can usually find time to finish uncompleted lessons. However, there would not be time in a five-day block. Such suggestions appear to illustrate that if fleximode is introduced more widely,consideration must be given to such small but important administrative matters.

Petrol Fuel Injection

Petrol Fuel Injection is a subject within the Certificate in Auto Engineering offered by the WA TAFE system. Although all subjects within this certificate are not currently taught, Petrol Fuel Injection is an extremely popular subject for persons working in the automotive repair and servicing industry because most of the major motor manufacturers are now using petrol fuel injection as a means of fuel metering in place of the carburettor. It has been necessary, therefore, for many tradespersons to update their knowledge in this area.

Normally Petrol Fuel Injection is taught at a metropolitan TAFE college on a face-to-face basis for two hours per week over a semester. Such a pattern of attendance is not always suitable for adults with various other commitments, or for those in country areas. When people within the colleges were contacted regarding fleximode at the start of the project the lecturer teaching this subject suggested that fleximode delivery of the course would be a suitable means of delivery. Accordingly, a letter was sent to a number of organizations (six regional TAFE centres, thirteen prominent mining companies and five government departments) in order to publicize the course. Interested persons were asked to complete a pre-enrolment form in order to find out whether a viable class was possible (the minimum number stipulated was 10). By the end of January, 1989, eleven students had enrolled and the course commenced in the first semester, 1989.

Programme Delivery

The course was organized in a similar way to the motorcycle apprenticeship course. The off-campus component was completed by correspondence, with an assignment to be submitted at the end of each of the six sections. The on-campus component consisted of a two-day practical session at the college. At the end of the course, students were expected to sit for a final exam. Allocation of marks was as follows: assignments - 20%; practical exercises - 30%; examination - 50%. It was expected that the course would be completed in one semester.

Resources

Students who had enrolled were supplied with a study guide for sections 1 and 2 and asked to buy the standard textbook for the course. The study guide for sections 3-6 was supplied only after the first assignment was completed. The initial study guide outlined the course requirements, a suggested time-line, the date of the practical session and some study hints. In addition, it also contained a copy of the syllabus which was written in terms of student objectives, and it was suggested that students use this to check their progress on a systematic basis. In each of the six sections of the study guide, there were notes written by the lecturer, page numbers of the text that the student was expected to read, and the assignment to be submitted.

Evaluation

The students' results were compared with the results of students studying the same subject in evening classes.The lecturer was also interviewed and students were given written questionnaires. The financial cost of delivering this subject by fleximode, as compared to the traditional on-campus mode, was also examined.

Student Outcomes

At the start of the course twelve students were enrolled. All students were males with a mean age of 41.25 years; all were currently working, and they came from both metropolitan and country areas. Four students withdrew from the course and the reasons given were primarily work pressure (one student was a foreman and the others were working a considerable amount of overtime) and age (a 55-year-old student).

Students were expected to complete the six assignments and attend the two days on-campus. It was originally planned to complete the subject in one semester, and the on-campus component was held at the end of the first semester. However, as not all students completed the assignments before the practical, yet were still keen to continue, the lecturer continued to process their assignments. All eight students therefore completed the on- campus and off-campus components and registered to sit for the examination (three in Semester 1 and five in Semester 2). This is a retention rate of 66 percent. Due to problems beyond the students' control, only six students sat for the exam and all passed. The average mark was 75.7% (A), and ranged from 94% (A) to 60% (C). The comparison group, a traditional evening part-time class, had similar results with a mean of 77.7% (A), ranging from 60% (C) to 94% (A).

Comparison of Costs

Table 6.3 sets out the comparative costs of delivering this subject by the traditional classroom method or by fleximode. It can be seen the fleximode appears to be the most cost-effective way to run the course with a class of 12 students, as the cost per student is $134.06 compared to $195.14 for the traditional class.

Degree of Students' Satisfaction

All eight students completed a questionnaire towards the end of their practical component. All were more than satisfied with the off-campus component (four gave a rating of '5' and four a rating of '4') and the on-campus component (six gave this a rating of '5' and two gave a rating of '4'). The only complaint about the off-campus materials was the poor reproduction of some of the pictures and diagrams (three students) and the lack of practical equipment with which to work during the off- campus study. Most students reported the text was well organized and easy to understand, and the lecturer's comments to be very valuable. *'His comments helped to maintain my confidence in continuing the course'*. Suggestions for improvements included colour

coding the drawings, using video tapes and an alternative textbook.

All the students were very complimentary about the on-campus component: *"Well put over and hands on teaching aids are great"*. *"Very professionally done"*. *"Presentation was excellent in view of the time in which it had to be achieved"*. The only criticism from seven of the students was that the time was too short: *"Not enough time to cover and re-cover things ... (need to) have time to absorb more"*. Most seemed to think three days were needed. One student believed there should have been less theory covered and more time assigned to practical tasks, but this was not possible because some students had not completed all the required theory. If this is a problem, it may be necessary to formulate some rules about the number of assignments that have to be completed prior to the on-campus component.

Cost Factors	Traditional Classes	Fleximode
On-campus teaching	Lecturer costs: 34 hrs x $29.94 = $1 017.96	Lecturer costs: 2 days x 8 hrs x $29.94 hr = $479.04
Off-campus teaching	Nil	
Teaching resource material	Nil (Allowed for in teacher's DOTT time and student's contingency costs)	Preparation costs = $165. Student's costs in one year = $33[a]. Photocopying costs: 100 pages x 5 cents page = $5.00. Total cost= $38 x 12 students = $456.00
Contingency costs per student	12 students x $192.81 per student = $1 113.72	On-campus costs = $\frac{16}{34}$ x 92.81 per student x 12 students = $524.10 Postage = 6 lessons x 12 students x 41c = $29.52 Total: $553.62
Capital costs of classroom	Loss of opportunity costs = 17 evenings x $30[c] evening = $210	Loss of opportunity costs = 2 days x $60c day = $120
TOTAL COSTS	$2 341.68	$1 608.66
Costs per student:	$195.14	$134.06

Table 6.3

Comparative costs of delivering Petrol Fuel Injection by traditional class delivery and fleximode

a This is based on 12 students using the package each year for 5 years.

b The proportion of $\frac{16}{34}$ was calculated by dividing the number of fleximode on-campus hours by the traditional number of on-campus hours. It is possibly an under-estimation, as the college still had to provide a number of resources such as prepared automobile parts, even if students only attended for 2 days.

c This is an underestimation of the costs of hiring a workshop as the building and running costs are much higher than a classroom.

However, as only one student made this complaint, and there was a general sense of high satisfaction in the group, this may not be necessary. It may be preferable to retain the flexibility of two semesters for students such as these who work long hours and are not used to studying.

Students' Comparisons of Delivery Modes

Only two students had previously studied by correspondence. One must have had the experience of having to meet deadlines because to him the main advantage of fleximode over correspondence was, *"No pressure to be on time. Understanding lecturer"*. This appears to reiterate the previous point made about flexibility. The other student praised the inclusion of an on-campus component: *"Able to have hands-on work and communicate with a teacher who is interested in us"*. There were no real disadvantages according to these two students.

Six students made comparisons between fleximode and traditional classes. Four students saw the flexibility of fleximode as the main advantage: *"I can study when it suits my workload and emotional state"*; *"Don't lose as much work time. Able to take your time to get a good understanding of things"*. One student saw the most important advantage as not having to attend classes and the other student just pointed out the advantages of the on-campus component. The main disadvantage for four students was finding enough time to study: *"My particular problem is working a lot of overtime including Saturdays and Sundays. This gives me little spare time for my family and study"*; *"Telling myself to study instead of doing things I would rather do"*. The other two students regretted that it was not possible to better integrate the practical and theory components: *"No tools at home"*; *"Not seeing things you are studying"*, and one also made the comment that he would have preferred more teacher contact.

Choice of Delivery

When asked to choose their preferred mode of delivery, four students chose fleximode; three students chose classes and one student (from Halls Creek) chose correspondence. Six students gave reasons for their answers. Fleximode was easier to fit in with employment demands (two students) and the other student just preferred this mode of study (correspondence was his second choice). Classes were preferred by two students as it was easier to *"divorce myself from work and other distractions"* or, *"You gain more information by going to classes"*. The student who chose correspondence would not have had time to attend classes but he also found the on-campus component of fleximode was financially very costly for him.

Lecturer's Comparisons of Delivery Modes

When comparing fleximode delivery with correspondence delivery, the lecturer saw the on-campus component as very valuable for students and the lecturer. He believed that, for the student, the practical component was more readily covered and a number of problems sorted out on a face-to-face basis. In addition, if the students' assignments revealed areas of misunderstanding, these could be explained and worked through in the on-campus session.

Differences noted by the lecturer between fleximode and traditional classes included: less personal contact between lecturer and students; the rushed tempo of the time in class

and the separation of the theoretical and practical components. These two latter points had also been noted by some students. The classtime was so rushed because the lecturer found he had to revise the theory in order to introduce the practical components. This took more time than was anticipated and may have been made more difficult because some students had not completed the theory. There are possible solutions to these problems. First, the introduction of practical teaching aids with the theory component could aid integration of theory and practice, as well as reducing the material to be covered in class. However, the engine parts required for the practical are sealed and need to be specially prepared by the teachers. To enable students to gain access to these aids could be difficult. Possible other solutions include increasing the on-campus time to three days and insisting students complete the theory before attending.

The lecturer noticed very little difference in the students' understanding of the subject or in their assignment work, compared to students attending regular classes, but he did find the students asked more questions and appeared to be a more cohesive group. This could have been because of the homogeneous age grouping , the intensive nature of the instruction or their common theoretical background.

In terms of the advantages for students, the lecturer saw the flexibility of the time commitment as important, as well as their not being restricted geographically from doing the course. He believed that fleximode could increase the student population able to study at TAFE and could therefore lead to a more highly skilled workforce.

He cited the main disadvantages for students as: the need to be more self-disciplined in their approach to study; not being exposed to practical teaching aids while learning the theory; having to take time off and often travelling a considerable distance in order to complete the on-campus component.

For the lecturer himself, there was no advantage in using fleximode. Fitting the marking load and administration into his normal teaching load was quite difficult. The rewards for the lecturer, however, lay in succeeding in something he believed to be worthwhile, and in providing a service for students.

Student and Subject Suitability

The lecturer found that the students who coped best with fleximode seemed to be the younger students who were self-motivated. Students of 50 years of age or more, or those with heavy workloads, found it more difficult. In addition, students working in government departments were more easily able to take time off from their job, whereas students working in a private capacity found attendance at the on-campus component very expensive due to missing out on work time.

In terms of the subjects most suited to fleximode delivery, the lecturer believed that research needed to be carried out to match subject with delivery mode. Perhaps for the more theoretical subjects, no on-campus component would be necessary. For subjects with a practical component, it would be necessary to evaluate carefully which parts of the subject should be studied on- and off-campus, and the best way to go about this.

Mode of Payment

This lecturer was paid in the normal way for teaching the on-campus component. Marking and administration time for the off-campus component was recorded by the lecturer and at the end of year counted as teaching time and was paid for accordingly. He marked 37 assignments, which took about 15-27 minutes per assignment, totalling approximately 9 hours. He taught eight hours a day for two days (16 hours). Time allowed for the preparation of materials for the course was 10 hours, for which the lecturer was paid $16.50 an hour, the usual college contract rate for this work.

The lecturer believed this was an equitable means of payment for course delivery but the time allowance for preparation was inadequate. Much of the preparation of the course materials was done during the lecturer's vacation time, using his own facilities. This may not be possible or even desirable for all lecturers.

However, if fleximode is to become more widely spread in the TAFE system, marking and administration time will have to be allowed for in lecturers' timetables. Perhaps marking could be classified as teaching as it is at TAFE External Studies College, and a similar time allowance given.

The lecturer in this programme believed that the main advantage of fleximode for the TAFE system is that all practical subjects can be offered in this way. This is particularly important for post-trade subjects such as Petrol Fuel Injection. Potential students usually have long, and often irregular working hours yet wish to keep their skills up-to-date. Although it may be thought that potential students in the trade areas are practical people who are not suited to learning by any means other than face-to-face classes, the success of this project appears to illustrate that this is not so. Most of the students appeared to be well satisfied with the course and coped very well. It seems to be just a matter of designing the course and materials well and to have an understanding lecturer who gives encouraging feedback to the students.

Lecturer's Conclusions

Recommendations made by the lecturer were similar to those made by some students. These included the sending out of practical teaching aids, the provision of alternative delivery modes such as videos, three days on-campus rather than two days, and perhaps delivering the on-campus component in a mobile van in country areas. More professional advertising of the course was also needed.

In addition, the lecturer also believed that subjects with an off- campus component, such as fleximode and correspondence, are best delivered from the colleges by lecturers who are also teaching traditional classes, as he/she can more readily keep up with the lastest developments. However, there needs to be formalization of payment and/or time allowed for the extra working and administration that other delivery strategies entail. His final comment was that fleximode is a very worthwhile idea and *"should be pursued (and promoted) more widely"*

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EXTERNAL STUDIES FLEXIMODE

Two of the fleximode programmes studied were instituted by TES lecturers in order to improve the quality of their correspondence courses. These were the subjects "Aeroplane Performance and Operation 2" from the Commercial Pilot Licence Stage 1 and "Municipal Practice C, Part 1" from the Diploma of Local Government. Although both of these subjects are taught in traditional classes, they are also available by correspondence because of the demand from students whose jobs preclude regular class attendance. Students studying for their commercial pilot's licence are trying to build up flying hours and local government employees are scattered throughout Western Australia employed by many small local authorities (Brown 1988).

COMMERCIAL PILOT LICENCE COURSE

To obtain a Commercial Pilot's licence, an accredited private pilot needs to pass six exams in various subject areas, and a final exam,all of which are set by Department of Civil Aviation. There is a course offered by WA TAFE which prepares students for these exams. Students can study on either a part-time or a full-time basis at a college where they are given traditional classes, or they can study by correspondence through TES.

The lecturer who takes the correspondence course for TES also teaches some of the traditional classes. He has been concerned that the drop-out rate of the students from the correspondence classes seems to be much higher than that from the traditional classes. He has also found that students who study by correspondence raise common queries and make similar errors and omissions in the work they submit. It is his belief that such problems could be more efficiently dealt with during a face-to-face session with all students, rather than by responding individually to each student.

From his experience also, the lecturer has found that some aspects of the course are more effectively taught on a face-to-face basis, for example, certain mathematical concepts. Persons studying for their commercial pilot's licence tend to come from varied academic and experiential backgrounds, and the lecturer has found they can master certain concepts more quickly in an interactive situation where individual differences can be dealt with promptly.

Due to these various reasons, the lecturer was keen to try fleximode delivery of subjects within the course.

Programme Delivery

For the present project, it was decided to deliver one subject, Aeroplane Performance and Operation 2, by fleximode. This subject involved the students having to master concepts that were difficult to learn by correspondence, but which the lecturer had found could be taught effectively in a face-to-face situation where the lecturer and the student could interact, and the lecturer could respond more quickly to the students' difficulties.

The external studies materials for this subject were also more easily adapted to a fleximode delivery without extensive rewriting. This was because the course contained three trial exams, allowing the lecturer to replace these with three tutorials. The lecturer sent a letter to all metropolitan students (11) enrolled by correspondence in this subject in first semester 1989 and invited them to attend tutorials instead of completing the three mock exams in their course. Five students responded positively. A telephone followup resulted in a further three students interested in attending the tutorials.

Resources

The students were issued with the TES study guides for the course and were required to refer to two textbooks.

Outcomes of the Programme

For the subject, Aeroplane Performance and Operation 2, no student results were available as the students themselves decide when to take the CAA exam. The programme was therefore evaluated through an interview with the lecturer.

With this subject, there were twelve assignments to be completed and the lecturer held tutorials after the completion of assignments 4, 8 and 12 respectively (although not all students kept to the same time-line). Four students attended every tutorial and three students attended one tutorial each.

For the first tutorial the students were not sure of what was required. They had few questions and therefore the lecturer went through a list of prepared topics. At the second tutorial, the students had done very little study in the interval, possibly expecting that the lecturer would cover most of the material during the tutorial. Again, the lecturer did most of the talking. The lecturer found the third tutorial was the best, with the students mostly up-to-date with their lessons and prepared with a list of questions.

In general, the lecturer was pleased with the results of this programme. He had been able to meet the students, clear up many of their problems, and increase their understanding of the subject. Feedback from the students to the lecturer indicated that they also found it to be advantageous to their study.

The lecturer estimated that the time spent taking the tutorials was similar to the amount of time he would have spent marking assignments, as four students attended each tutorial and the tutorials were each of two hours duration. Less time also may have been spent speaking to students individually, as many of the problems were covered in the tutorial. The costs to TAFE were therefore the same as running the course by correspondence.

The lecturer recommended that another four subjects within the course could be developed for fleximode delivery, although changes would have to be made for the subjects that did not have take-home exams. The only difficulty in reorganizing subject delivery in this way, however, was that students would need to enrol and complete assignments at scheduled times in order to receive maximum benefit from the tutorials. (Students presently can enrol at any time and can take any time to complete a subject.) As country students would find it difficult to attend tutorials, the subjects would have to be structured in such a way that alternatives (such as take-home exams) to tutorials would have to be offered.

In general, this lecturer believed that, although face-to-face teaching is the best way of teaching students, fleximode

should be used more widely across TAFE as it allows more flexibility for students. It also enables a face-to-face dimension to be added to correspondence teaching.

DIPLOMA IN LOCAL GOVERNMENT

The WA Department of TAFE offers two diplomas specifically for local government employees; the Diploma in Local Government (Clerk) and the Diploma in Local Government (Treasurer), which are the minimum requirements for a local government employee to hold a position as either a clerk or treasurer respectively within local government.

Up until five years ago, TAFE provided either correspondence courses or traditional classes on a part-time basis at one metropolitan college and one or two regional colleges, depending on demand. However, a report in 1987 noted that most local government employees found it necessary to study some or all of their courses by correspondence, and such a method was extremely 'unpopular' with students (cited in Brown 1988).

In 1985, a metropolitan TAFE college offered intensive courses for country students in selected subjects and these proved quite popular. The students found the contact with other local government employees to be extremely useful and supportive, as many had to work in total isolation from their peers. There was also a reported increase in the numbers of students successfully completing the subject (Brown 1988). However, the intensive course was difficult to deliver because the lecturers at the college had to teach the intensive course in addition to their normal lecture load (usually evening classes), resulting in a lecturing overload. It was decided therefore, to change the venue to TES College and give the courses a fleximode format, that is, a combination of an intensive face-to-face course for about 30 hours (approximately five days) followed by some self-study, assignments and an exam. In addition, in 1988 two other courses were offered in country venues, with an 8-10 hour intensive face-to-face session covering approximately 30 percent of the course,the remaining 70 percent being covered by correspondence assignments. All except one student passed these two courses and all those who took part expressed a high level of satisfaction with this mode (Brown 1988). None of these fleximode courses had been formally evaluated so it was decided to include an evaluation of one of these courses as part of this project. The subject chosen was Municipal Practice C Part 1.

Programme Delivery

The on-campus component of the subject was held at TES College, in the seminar room, over a five-day period (approximately 30 hours). The material was delivered by the traditional expository method, although each of the students was asked to prepare a presentation on a particular topic. The off-campus component required students to study in greater depth, topics introduced in the on-campus component and complete two assignments. All students were required to sit an essay type exam.

Resources

At the beginning of the course the students were given a handout outlining the method of delivery, a reading list and dates for the on-campus component and submission of assignments. They were asked to buy a textbook.

The lecture notes were prepared by the same lecturer who supervised the course and marked the assignments. This lecturer was also available for private consultation by students by letter, telephone or in person. Students were expected to develop their own notes for the course, although handouts on certain aspects of the course (photocopied articles, etc) were provided.

Evaluation

For the subject, Municipal Practice C Part I, the lecturer was interviewed and the students were given a questionnaire at the end of the on-campus component and asked to mail this back to the lecturer. Of the 22 students enrolled in the course, 16 responded, a response rate of 73 percent. The questionnaire differed in some respects to that given out to the other groups because the programme was a variation on correspondence teaching rather than on classroom attendance.

Characteristics of the group responding to the questionnaire can be found in Appendix 4. All except two were males, with an average age of 32 years. All students except one in the group were married. Ten married students had children at home. Family commitments were mentioned by some as the reason why they had problems with the correspondence mode.

Student Outcomes

Of the original 22 students who took part in the on-campus component, 16 completed all the requirements of the course (75 per cent). This is similar to the retention rate of a class of students studying the same subject traditionally in the on-campus mode. Exam results were also similar (Table 7.1).

According to the lecturer concerned, 75 per cent is a higher retention rate than was formerly achieved when the subjects were taught by correspondence. Unfortunately, no figures are available on the retention rate of correspondence students at TES due to the way in which students are able to enrol, but a Head of Department in Business Studies believes this to be about 60 percent in his department for students part-way through their courses.

		Retention Rate		Exam Results			
						Range	
Type of Class	(N)	N	%	$\bar{x}$	sd	High	Low
Traditional	(16)	12	75%	77.00	6.74	91	67.5
Fleximode	(22)	16	73%	74.19	10.03	89	54.0

Table 7.1

Retention rate and exam results of Local Government fleximode class compared to traditional class

Cost Component	Traditional Classes	Correspondence Teaching	Fleximode
On-campus teaching	Lecturer costs: 51 hours x $29.94 = $1 526.94	Nil	Lecturer costs: 30 hrs x $29.94 = $898.20
Off-campus teaching	Nil	10 lessons x 22 students x 35 min per lesson = 128.5 hours x $15.43 hr = $1 982.76	2 assignments x 22 students x 35 min per assignment = 26 hrs x $15.43 hour = $401.18
Teaching resource material	Preparation and production: Nil (Teacher's DOTT time and student contingency costs	Preparation and production: 22 students x 14.62 student = $321.64	Preparation and production: Nil (Teacher's DOTT time and student contingency costs)
Contingency costs per student	$6.18 x 22 students = $135.96	$5.85[a] x 22 students = $128.70	$6.18[b] x 22 students = $135.96
Capital costs of classroom	Loss of opportunity costs: $30 x 17 evenings = $510	Nil	Loss of opportunity costs: $60 x 5 days = $300
TOTAL COSTS	$2 172.90	$2 433.18	$1 735.34
Cost per student:	$98.77	$110.60	$78.88

Table 7.2

Comparative costs of delivering Municipal Practice C Part 1 (Local Government) by traditional classes, correspondence and fleximode

[a] Initial postage ($1.15) + 10 lessons @ 41c lesson ($4.10) and one telephone call, paper photocopying (60c).

[b] Full contingency costs were used because the students were given similar amounts of photo-copied notes and material as the students in traditional classes.

Comparison of Costs

The comparative costs of delivering Municipal Practice C Part 1 by the traditional classroom methods, correspondence and fleximode delivery, are set out in Table 7.2.

It can be seen that the cost of delivering the subject by fleximode ($78.88 per student) is slightly less than traditional classes ($98.77) and correspondence ($110.60).

Students' Comparisons of Delivery Modes

All except one student had previously studied by correspondence, and were able to make comparisons between this and their fleximode study (Table 7.3). Ten of the 15 students mentioned the advantages associated with studying with a teacher: *"The teacher can stress the more important areas ... explain more clearly than the textbook"....."If you have a query you can ask the teacher in class and get an immediate reply. With correspondence a reply to a query can take weeks"*. One-third of the students mentioned the value of studying with other students: *"You are able to get other person's point of view, making sure you are on the right track"*.

Students saw varying disadvantages with this mode of study, although that most frequently mentioned was that so much material was covered so quickly that it was quite exhausting: *"After the third day my concentration begins to lapse"*. One student suggested that one or two assignments could be completed prior to the course as an introduction to the study. This could cut down the amount of material to be covered during the on-campus component since the students would have more background knowledge of the subject.

Students were asked whether they had obtained any texts or references before the course and whether they had done any preliminary reading. In fact, eleven students had obtained some course materials and seven students had done some preliminary reading. However, as most of the students only received prior notice of the programme of study about two weeks (one student, two days) before the on-campus component, there would not have been a lot of time to study. There is some indication however that students may be willing to undertake some preliminary study.

Another way to reduce the pressure would be to run the on-campus component in two shorter periods. However, this is probably not feasible because many of the students have to travel long distances to attend.

Two students mentioned the difficulty of obtaining leave to attend the course. The students were asked to what extent they had been assisted by their employer to study for the diploma and it appeared that only three students had to use part of their annual leave. All other students were given leave with pay.

Eleven students made some comparisons between classes and fleximode (Table 7.4). It is interesting that, while four respondents said that learning so much over a short period was both more efficient and exhilarating, three other respondents found it to be less efficient as there was so much to absorb so quickly. This illustrates yet again the importance of taking into account pronounced individual differences between students in the way they prefer to study.

Advantages and Disadvantages	Frequencies (N = 15[ab])
Advantages	
Interaction with teacher	10
Interaction with fellow students in a class situation	5
Less distractions from work and family	3
Disadvantages	
On-campus time intensive, rushed, exhausting	6
Travelling and accommodation expenses when on-campus	2
Obtaining leave for on-campus component	2
Timing of on-campus component	1
Insufficient background knowledge prior to on-campus component	1
Insufficient depth of study	1
No disadvantages	4

Table 7.3

Advantages and disadvantages of fleximode compared to correspondence delivery (Local Government employees)

[a] One student made no comments.

[b] Some students gave multiple respons.

Choice of Delivery

Respondents were also asked to make a choice between delivery modes and they were given four choices - correspondence, classes, or two types of fleximode, one with the on-campus component held in a regional location (fleximode regional) and one similar to the present mode of study (fleximode central). Eight respondents preferred fleximode regional, seven chose fleximode central and one preferred classes. The regional fleximode was most popular because there was less travelling and lower accommodation costs involved and possibly less time off work (a number of students assumed the regional on-campus component would be shorter since that was how previous regional courses had been held).

It is clear that the majority of the students preferred some type of fleximode delivery rather than classes or correspondence. One student suggested that, if the regional on-campus component were shorter, more off-campus study could be substituted, some before and some after the on-campus study. Another suggestion made was a super intensive course of 8-10 days, including the examination and challenge tests.

Advantages and Disadvantages	Frequencies (N = 11[ab])
Advantages	
More efficient learning (continuity, more interesting)	4
Less travelling and/or time involved	2
Other: Forced to study, qualified teacher, easier to find time from commitments once a term	3
No advantages	2
Not applicable/no answer	5
Disadvantages	
Having time away from work	4
Less efficient learning, too much to absorb	3
Parking	1
No disadvantages	2
Not applicable/no answer	6

Table 7.4

Advantages and disadvantages of studying by fleximode compared to weekly classes (Local Government employees)

[a] Five students made no comment.

[b] Some students gave multiple responses.

Lecturer's Comparisons of Delivery Modes

The lecturer had previously taught subjects in this area in traditional classes and was now teaching by correspondence. He was therefore in a position to make comparisons between fleximode and these other methods of delivery.

The main advantage of this fleximode format over classes was the reduced class contact time for students who would find it difficult to attend classes. It also made it possible for TAFE to run viable classes for a geographically scattered group such as local government employees. Fleximode was also cheaper.

The disadvantage, according to the lecturer, was that there was not time enough to cover the material in any depth or to relate it to practical situations. He did find, however, that the assignment work was of a higher standard compared to that of traditional external studies assignments.

Compared to correspondence teaching, the students were able to obtain direct feedback about their problems or queries and to have important interaction with peers. This is particularly valuable in this area of work where employees are so scattered and have very little opportunity to 'talk shop' with others working in the same industry.

The lecturer also believed that introducing an on-campus component into correspondence courses was very useful for lecturers working in distance education. It enabled them to keep in touch with what is happening in industry, and gave them the chance to keep up their lecturing skills. Unfortunately there were difficulties for both staff and students because TES College is not really set up to provide on-campus teaching. It is necessary to teach in a seminar room and students have problems finding parking.

Student and Subject Suitability

This lecturer believed that fleximode is mostly suited to rural and isolated students, or for those who find it difficult to attend classes, e.g. those on shift work or with strong demands on their time. He also believed that subjects with a high theory component are most suitable for fleximode delivery, more so than practical subjects.

Mode of Payment

The lecturer's time was easily slotted into his normal timetable and therefore no extra costs were involved.

Lecturer's Conclusions

There are a number of courses offered by TES College where the addition of an on-campus component could improve the delivery of the course, as well as being quite cost-effective. They would have to be more professionally packaged and the material written specifically for the mode of delivery rather than the lecturer adapting material designed for face-to-face or correspondence delivery. As TES is currently revising its external studies packages so that they can be delivered in any mode, it may be possible to use these for this type of fleximode delivery. Students would need to be told well in advance what will be required. There also needs to be additional provision made within the College, for example, a fully equipped classroom, administrative support, and time allowed for class preparation. An external studies college such as TES appears to be in an ideal situation to provide fleximode delivery because the lecturers are not so tied down to a regular timetable and can easily slot in on-campus time as well as provide the administration required for the off-campus component.

8

COMPARISON BETWEEN FLEXIMODE PROJECTS

The comparisons made between the fleximode programmes and traditional delivery methods revealed no significant differences in educational efficiency as indicated by students' retention rate and exam results. However, there appeared to be a number of qualitative differences between the programmes, such as learner satisfaction, and these differed between individuals within programmes. Comparisons across the six different fleximode programmes will thus be made to highlight these differences and possibly identify important factors in the organization of fleximode.

Comparisons between fleximode projects will centre on information derived from the questionnaires completed by the students and interviews with lecturers. TES students were asked slightly different questions (Local Government), or not questioned at all (Commercial Pilot's Course). They were therefore not included in all the comparisons.

Organization of Fleximode

Each of the fleximode programmes was organized differently, ranging from mainly off-campus study reinforced with a minor on-campus component (Commercial Pilot's Course) to principally on-campus, with off-campus revision and practice (Local Government and Accounting 1A). There were also suggestions made by lecturers and students about different ways their programmes could have been organized. This illustrates that there are a number of different possibilities for effective fleximode delivery and that any system introducing fleximode should include provision for accommodating this. Organization should also be based on educational grounds rather than ease of administration. In Ashurst's evaluation, Ballarat College, with its one-week-on, one-week-off cycle, had experienced a reduction in courses offered by fleximode(Ashurst 1986). Accounting 1A, which was similarly organized for institutional reasons, did not appear to be as successful as other programmes with more flexible organization.

Students' Experience of the Organization

The information from Victoria and South Australia suggested that it is important that students know from the beginning how their course is to be organized. Students in four of the programmes were asked to rate the degree to which they themselves understood four different aspects of course organization using a rating scale from '1' to '5', where '1' was 'Not at all true' and '5' was 'Absolutely true'.

These aspects were:

- general course organization;
- those parts of the course which they had to study by themselves;
- class attendance times;
- due dates for assignments, tests, examinations.

Students were also asked whether the study guide was easy to understand, how easy it was to have their problems cleared up, and whether their study was personally more convenient with fleximode.

Table 8.1 indicates the results. It would appear that most of the students in all of the groups knew from the beginning about class attendance times and due dates for written work. Some students were not quite clear about the overall organization

Type of Experience : Fleximode Group	(N)	Extent of Truth: Unknown	Not at all True 1	2	3	4	Absolutely True 5
Understood organization from the start:							
Accounting 1A	(20)	0	5	2	6	2	5
Child Care	(9)	0	1	0	2	1	5
Motorcycle Mechanic	(4)	0	1	0	0	0	3
Petrol Fuel Injection	(8)	1	0	0	1	1	5
Knew which parts to study by self:							
Accounting 1A	(20)	0	5	3	3	5	4
Child Care	(9)	0	0	0	1	2	6
Motorcycle Mechanic	(4)	0	0	0	0	0	4
Petrol Fuel Injection	(8)	2	0	0	0	1	5
Knew class attendance times:							
Accounting1A	(20)	1	2	0	2	3	12
Child Care	(9)	0	0	0	0	0	9
Motorcycle Mechanic	(4)	0	0	0	0	0	4
Petrol Fuel Injection	(8)	1	0	0	0	0	7
Knew when assignments, etc due:							
Accounting 1A	(20)	0	0	1	3	3	13
Child Care	(9)	0	0	0	0	0	9
Motorcycle Mechanic	(4)	0	0	0	0	0	4
Petrol Fuel Injection	(8)	1	0	1	0	1	5
Study Guide easy to understand:							
Accounting 1A	(20)	0	1	3	6	2	8
Child Care	(9)	0	0	0	0	4	5
Motorcycle Mechanic	(4)	0	0	0	1	0	3
Petrol Fuel Injection	(8)	1	0	0	2	2	3
Problems could be cleared up:							
Accounting 1A	(20)	0	1	2	7	4	6
Child Care	(9)	0	0	0	3	3	3
Motorcycle Mechanic	(4)	0	0	0	0	0	4
Petrol Fuel Injection	(8)	1	0	0	0	3	4
Study was more convenient personally:							
Accounting 1A	(20)	2	3	1	1	4	9
Child Care	(9)	0	0	0	3	1	5
Motorcycle Mechanic	(4)	0	0	0	0	0	4
Petrol Fuel Injection	(8)	1	0	0	1	0	6

Table 8.1

Students' experience of the organization of fleximode by fleximode groups

Type of Difficulty: Fleximode Group	(N)	Extent of Difficulty: Not at all difficult 1	2	3	4	Extremely Difficult 5
Difficulty when studying by self:						
Accounting 1A	(20)	3	4	7	2	4
Child Care	(9)	2	3	2	2	0
Motorcycle Mechanic	(4)	1	2	1	0	0
Petrol Fuel Injection	(8)	1	3	3	1	0
Local Government	(16)	0	0	7	7	2
Total Frequencies	(57)	7	12	20	12	6
Total %		12	21	35	21	11
Difficulty when studying in class:						
Accounting 1A	(20)	13	2	3	1	1
Child Care	(9)	4	2	1	2	0
Motorcycle Mechanic	(4)	3	1	0	0	0
Petrol Fuel Injection	(8)	4	4	0	0	0
Local Government	(16)	4	10	1	0	1
Total Frequencies	(57)	28	19	5	3	2
Total %		49	33	9	5	4

Table 8.2
Difficulty in understanding subject content by fleximode group

or which aspects they were expected to study by themselves. A slightly higher proportion of students in Accounting 1A fell into this category. This agrees with the lecturer's comments, that, due to unfamiliarity with the fleximode method of delivery and the need to adapt correspondence material, the course was not as well planned as he would have preferred.

When studying by fleximode it is important to have materials which are easy to understand as there is less frequent contact with the lecturers. All students except the Local Government students were given a study guide. As Table 8.1 indicates, the majority of students found the study guide easy to understand, although only 50 per cent of the Accounting 1A group gave this a rating of '4' or '5', compared to all of Child Care students, three of the four Motorcycle apprentices and five of the eight students studying Petrol Fuel Injection. This is an interesting finding, given that the study guide used with Accounting 1A was developed for correspondence teaching, with no face-to-face student/teacher contact expected. However, the confusion could be due to the use of materials developed for one mode of delivery, in this case, correspondence, for another mode of delivery, that is, fleximode.

Students were also using external studies materials which were about to be replaced, so the lecturer may have been trying to teach slightly different content from the study guide. Keeping subject material up-to-date is certainly easier for those lecturers teaching traditional classes compared to teaching by fleximode or correspondence where a study guide is supplied. However as Blesing (1987) pointed out, modern desk-top publishing techniques have made this process easier and cheaper.

As students were seeing the lecturer less often, it would be expected that they may find it difficult to clear up problems. However, only three Accounting 1A students seemed to have difficulty with this, as shown by a rating of '1' or '2' on the scale, while all other students gave a rating of '3' or higher.

Students were also asked to judge whether the way the course was organized was more convenient for them personally. The majority of students saw this as true for them, reinforcing the findings from other sections of the questionnaire. Four students in Accounting 1A rated this on the lower end of the scale, indicating this to be not as true for them.

Understanding Subject Content

The majority of students found less difficulty understanding the material presented in class than when studying by themselves (Table 8.2). Eighty-two per cent of the students rated the difficulty level as extremely or very low when studying in class, compared to 33 per cent of the group when rating studying by self. Some groups (Accounting 1A and Local Government) covered most of the theory in class; others (the trade subjects and the Child Care group) covered little new theory in class, but regardless of whatever material was covered, students appeared to have a greater degree of difficulty in understanding when studying by themselves, compared with studying in class with a teacher.

Comparison between Modes of Delivery

Table 8.3 sets out the comparisons between the groups on the advantages and disadvantages given for fleximode as compared to traditional classes. Less or varied class attendance is seen as advantageous by approximately one-third of the group. The principle disadvantages appeared to be the need to be more organized and self-disciplined and finding enough time to study.

Ten percent of the group (all in the Accounting 1A group) saw no advantages at all with fleximode, compared with traditional classes. However, three students from the same group saw no disadvantages. This finding suggests that there are differences between students in the way they prefer to study even for the same subject, and what suits some students will not suit others. Allowing students a choice between different modes of learning therefore is important.

Type of Comparison	Petrol Fuel Injection (N=8)	Motor cycle Mechanic (N=4)	Child Care (N=9)	Accounting 1A (N=20)	Total Group (N=41)	Total %
Advantages:						
Less/varied class attendance	1	0	5	7	13	32
Able to study in own time	4	1	1	3	9	22
Learn more efficiently by self	0	3	2	0	5	12
Other e.g. less tired	1	0	1	1	3	7
No advantages	0	0	0	4	4	10
No response	2	0	0	5	7	17
Disadvantages:						
More organization, self-discipline	0	0	5	4	9	22
Finding time to study	4	1	1	2	8	20
Less teacher contact	0	1	2	1	4	10
Less practical - no integration with theory	2	1	0	0	3	7
Having to study without help	0	0	0	2	2	5
More work involved	0	0	1	0	1	2
Not enough time for teacher's explanations	0	0	0	2	2	5
Other, e.g. errors in material	0	1	0	1	2	2
No disadvantages	0	0	0	3	3	7

Table 8.3

Comparisons between fleximode and traditional classes by fleximode groups

Important Aspects	Extent of Importance: Not at all Important 1	2	3	4	Extremely Important 5
Chance to mix with other colleagues	0	0	2	7	7
Less interruptions to study	0	2	5	0	9
Doing less study by correspondence	1	2	7	3	3
Personal contact with teachers	0	2	2	12	0
Being able to study the course in class situation	0	0	1	3	12

Table 8.4

Important aspects of fleximode delivery: perceptions of Local Government students

Important Aspects of Fleximode

Students were given a list of various aspects of fleximode study and asked to rate the importance of these on a scale from '1' to '5' where '1' is 'Not at all Important' and '5' is 'Extremely Important'. The Local Government students were given a different list from the other four groups. These are listed in Table 8.4 and for the other groups, in Table 8.5 It appears that, for the Local Government respondents, mixing with other colleagues and being able to study in a class situation were the most important aspects of study for them.

Although from responses to the open ended questions it appeared that the majority of students saw less, or varied class attendance as the principle advantage of fleximode, responses to this question revealed that this was only one of the important aspects of fleximode. Table 8.5 indicates that "Talking to the teacher on a one-to-one basis" was 'Extremely Important' to almost half of the students (46%), although this was not general across all groups. About two-thirds of the students rated "Doing written work" at the upper end of the scale of importance ('4' or '5'), with the same trend evident across all groups. "More time to study in my own time and place" and "Not having to attend class

each week" were seen as very or extremely important by just over half of the students.

There was much variation between the responses of the Child Care group on the importance of "More time to study by myself in my own time", as some of the students with family commitments found that it was sometimes more difficult to study at home, within call of the family, than to attend classes each week: *"My husband still wants to talk, my children want my attention. I can't say nick off, I'm busy"; "At 5.30 I leave chaos when I close the door. The meat's in the fridge, see you later"*. It was interesting to see that, over the semester, all except one of the students with such problems seemed to overcome them. Learning to negotiate with the family for time 'on your own' is sometimes quite difficult for women with families who return to study. The one student who did not come to grips with studying at home admitted that it was really a problem of self-discipline.

"Mixing with other students" and "Learning in class with a teacher" were seen as very or extremely important by slightly less than half of the students. A larger number of the Accounting 1A group, however, were more inclined to rate the former as less important than the latter, whereas the Child Care group appeared to show the opposite trend. This could be because the Child Care group was a much more homogenous group, all attending the same lectures since their first year and working in the same occupation.

Although three of the four apprentices found mixing with other students as 'Extremely Important', opinions were more varied about 'Learning in class with a teacher'. Two apprentices found this 'Extremely Important' (*"glued to it"* was one student's comment), whereas the others gave this a rating of '3' and '4' respectively. All apprentices made an extra comment that they found the teacher's written comments to be extremely helpful and important.

Effective Ways of Learning

As fleximode is a combination of on- and off-campus study, students are more likely to experience a greater variety of learning modes than if they were studying either by correspondence or going to traditional classes. Students were therefore asked to rate the effectiveness of different types of learning for them. The effectiveness of a particular learning mode for a student is also likely to influence students' preferred choice of delivery mode.

Table 8.6 reports the results. The majority of students appeared to find "Learning from a teacher in a class" and "Tutorials, class discussions" the most effective ways of learning. About three-quarters of the group also gave "Workshops, practical sessions" a rating of '4' or '5', with all the apprentices rating this as "Most effective".

By comparison, "Studying by myself" was given a rating of '4' or '5' by only 19 per cent of the group, while 40 per cent gave this a middle rating of '3'. It would appear that the Accounting 1A and the Local Government students found this the least effective, as more than half of these students gave this a rating of '1' or '2'. The finding that, in general, students find learning by themselves less effective than learning in class with a teacher, corresponds to students' responses about difficulty in understanding subject content.

Important Aspects: Fleximode Group	(N)	Unknown	Not at all Important 1	2	3	4	Extremely Important 5
Extent of Importance							
Mixing with other students:							
Accounting 1A	(20)	1	11	0	5	2	1
Child Care	(9)	0	0	1	1	4	3
Motorcycle Mechanic	(4)	0	1	0	0	0	3
Petrol Fuel Injection	(8)	0	2	0	2	2	2
Total %	(41)	2	34	2	20	20	22
More time to study in own time and place:							
Accounting 1A	(20)	1	3	3	5	6	2
Child Care	(9)	0	0	2	2	2	3
Motorcycle Mechanic	(4)	0	1	0	0	3	0
Petrol Fuel Injection	(8)	0	0	1	2	2	3
Total %	(41)	2	10	15	22	32	20
Doing written work:							
Accounting 1A	(20)	1	3	1	3	7	5
Child Care	(9)	0	0	0	3	5	1
Motorcycle Mechanic	(4)	0	0	0	0	2	2
Petrol Fuel Injection	(8)	0	0	1	2	4	1
Total%	(41)	2	7	5	20	44	22
Learning in class with a teacher:							
Accounting 1A	(20)	0	2	2	5	9	2
Child Care	(9)	0	2	4	3	0	0
Motorcycle Mechanic	(4)	0	0	1	1	2	0
Petrol Fuel Injection	(8)	0	0	1	2	4	1
Total%	(41)	0	10	20	29	37	7
Talking to teacher one-to-one:							
Accounting 1A	(20)	1	2	1	6	3	7
Child Care	(9)	0	0	0	2	3	4
Motorcycle Mechanic	(4)	2	1	0	0	0	1
Petrol Fuel Injection	(8)	0	0	0	1	0	7
Total%	(41)	7	7	2	22	15	4
Not attending class each week:							
Accounting 1A	(20)	0	5	1	5	7	2
Child Care	(9)	0	0	0	2	2	5
Motorcycle Mechanic	(4)	0	0	0	0	2	2
Petrol Fuel Injection	(8)	2	0	0	2	0	4
Total%	(41)	5	12	2	20	27	32

Table 8.5
Important aspects of fleximode by fleximode group

Ways of Learning: Fleximode Group	Extent of Effectiveness (N)	Unknown	Least Effective 1	2	3	4	Most Effective 5
Studying by self:							
Accounting 1A	(20)	0	8	3	7	0	2
Child Care	(9)	0	0	1	4	2	2
Motorcycle Mechanic	(4)	0	0	0	1	1	2
Petrol Fuel Injection	(8)	0	0	1	5	1	1
Local Government	(16)	0	5	5	6	0	0
TOTAL %	(57)	0	23	18	40	7	12
Learning from teacher in class:							
Accounting 1A	(20)	0	0	0	1	6	13
Child Care	(9)	0	0	0	2	7	0
Motorcycle Mechanic	(4)	0	0	0	1	2	1
Petrol Fuel Injection	(8)	0	0	0	0	4	4
Local Government	(16)	0	1	5	8	1	1
TOTAL %	(57)	0	0	2	7	37	54
Doing research from books, journals							
Accounting 1A	(20)	0	3	4	10	1	2
Child Care	(9)	1	0	0	7	1	0
Motorcycle Mechanic	(4)	0	0	0	1	1	2
Petrol Fuel Injection	(8)	0	0	1	4	2	1
Local Government	(16)	0	1	5	8	1	1
TOTAL	(57)	2	7	18	53	11	9
Workshops, practical sessions:							
Accounting 1A	(20)	0	1	4	2	7	6
Child Care	(9)	0	0	0	2	4	3
Motorcycle Mechanic	(4)	0	0	0	0	1	3
Petrol Fuel Injection	(8)	0	0	0	0	3	5
Local Government	(16)	0	0	2	5	6	3
TOTAL %	(57)	0	0	11	18	35	35
Tutorials, class discussions:							
Accounting 1A	(20)	0	0	2	3	4	11
Child Care	(9)	0	0	0	2	7	0
Motorcycle Mechanic	(4)	0	0	0	0	0	4
Petrol Fuel Injection	(8)	0	0	0	0	3	5
Local Government	(16)	0	0	0	0	2	14
TOTAL %	(57)	0	0	4	9	28	60
Using audio-visual material:							
Accounting 1A	(20)	2	3	4	5	2	4
Child Care	(9)	0	0	0	4	5	0
Motorcycle Mechanic	(4)	4	0	0	0	0	0
Petrol Fuel Injection	(8)	0	0	0	3	3	2
Local Government	(16)	0	0	3	8	4	1
TOTAL %		11	5	12	35	25	12

Table 8.6

Effectiveness of different ways of learning by fleximode group

Other modes of learning included in the question were "Doing research from books, journals", and "Using audio-visual materials". About half the group gave the former learning mode a middle rating of '3'. Approximately two-thirds of the group found using audio-visual materials to be of moderate to high effectiveness. Interestingly enough, the four apprentices did not feel they had sufficient experience to give a rating on this, whereas they were of the age group most likely to have been exposed to audio visual aids during their schooling.

As well as comparing the four fleximode groups, the ratings of the fleximode Child Care group were compared to the traditional Child Care group (Table 8.7). Although numbers were so small it was difficult to make any real comparison, a higher proportion of students in the fleximode group appeared to find most modes of learning, except "Practical, doing things" more effective than the traditional group.

In general, however, the results of the groups seemed to be very similar, despite the fact that the fleximode group had experienced and had appeared to enjoy, studying much of the course by themselves.

Ways of Learning: Type of Group	Extent of Effectiveness (N)	Least Effective 1	2	3	4	Most Effective 5
Studying by myself:						
Fleximode	(9)	0	1	4	2	2
Traditional	(6)	0	2	2	2	2
Learning from a teacher in class:						
Fleximode	(9)	0	0	2	7	0
Traditional	(6)	0	1	1	4	0
Practical, doing things:						
Fleximode	(9)	0	0	2	4	3
Traditional	(6)	0	0	0	3	3
Tutorials, class discussions:						
Fleximode	(9)	0	0	2	7	0
Traditional	(6)	1	1	0	3	1
Using audio-visual materials:						
Fleximode	(9)	0	0	4	5	0
Traditional	(6)	0	2	2	2	0
Self-paced learning:						
Fleximode	(9)	0	1	4	2	2
Traditional	(6)	1	2	0	2	1

Table 8.7

Effectiveness of ways of learning by fleximode and traditional face-to-face class Child Care groups

Choice of Delivery

Table 8.8 lists choice of delivery for the four groups. All students in Child Care and all apprentices made fleximode their first choice. Half the students from the two other groups gave fleximode as their first choice, and all except one of the remaining students chose traditional classes. The one student who made correspondence his first choice was from Hall's Creek. He found fleximode too expensive due to travelling and time off work but also admitted it would be impossible to hold classes at Hall's Creek.

Fleximode Group	(N)	Choice of Delivery		
		Correspondence	Classes	Fleximode
Accounting 1A	(20)	0	10	10
Child Care	(9)	0	0	9
Motorcycle Mechanic	(4)	0	0	4
Petrol Fuel Injection	(8)	1	3	4

Table 8.8

First choice of delivery by fleximode group

It is interesting to speculate on reasons for the different choices of the groups. First, the composition of the groups in terms of age, gender and occupation seems to have no bearing on these results. The most enthusiastic groups were the Child Care students (females of varying ages) and the motorcycle apprentices (males of less than 20 years). The least enthusiastic groups were either older males (Petrol Fuel Injection) or a group of varied age and gender (Accounting 1A). All students except Accounting 1A were employed in what could be termed 'practical' or 'hands- on' occupations.

It might be suggested that the element of choice may affect the results. It would be expected that, if students are given a choice between fleximode and other more traditional forms of delivery, those students deliberately choosing fleximode would be more positive than students who were given no choice at all. However, the child care students and the motorcycle mechanic apprentices were given no other choice, yet were the two groups who were most positive about fleximode delivery.

It does seem, therefore, there may have been other reasons for their enthusiasm for fleximode. Of all the programmes, Accounting 1A appeared to have the most handicaps: it was started in a rush without proper preparation of students and teacher; the material was written for correspondence, not fleximode delivery; and attendance times were organized on the basis of college convenience rather than suitability for the students or the course material. In addition, Accounting 1A was different in that, in all other programmes the lecturer had either identified the programme and/or had been involved in writing some or all of the course material. This would tend to ensure these lecturers would not only be more enthusiastic about the concept but they would have a deeper understanding of what the total programme was all about.

There seems, therefore, a number of possible reasons why the students studying Accounting 1A were less positive than the other groups. What of the Petrol Fuel Injection students? One suggestion is that this group had the lowest level of face-to-face contact, while at the same time the least opportunity to integrate theory and practice during the subject because of the problem of the sealed engine components. Perhaps the degree of face-to-face contact, particularly with a practical subject where it is not possible to provide adequate teaching aids for the off-campus component, is a critical factor in the success of the programme. It is also possible that, as this group of students were older and had probably worked in a practical occupation since leaving school, they may have found learning by correspondence very demanding.

Lecturers' Conclusions

All lecturers concluded they would be willing to try fleximode again, although most suggested some modifications, particularly in terms of the rate of payment for off-campus teaching.

Lecturers all agreed that students were the main beneficiaries of fleximode, because of the flexibility of study commitment, improved learning and fewer restrictions due to geographical location. The disadvantages for students appeared to be the far more intensive on-campus time in some subjects, the need to become more self-disciplined and to study by themselves.

Four of the lecturers also found advantages for themselves in the use of fleximode delivery. The lecturer in Child Care saw that the resources, once developed, could also be used in traditional classroom teaching; the Motorcycle Mechanic lecturer appreciated the more flexible workload and the two TES lecturers found the contact with students very valuable.

Lecturers were divided about whether the group was more or less cohesive and whether they were able to build up more or less rapport with the students.This therefore may be related to factors other than delivery mode. There was also some disagreement between lecturers as to the most suitable subjects for fleximode, which suggests that the lecturer involved in the Motorcycle Mechanic Apprentice course made the most logical suggestion. He suggested that it was important to look at all subjects and the students undertaking them on an individual basis and decide on its appropriateness for fleximode delivery.

Most lecturers saw fleximode delivery as having great potential within the TAFE system, although there were certain aspects which had to be thought through and problems to be solved. These will be discussed in the final chapter.

9

FURTHER DEVELOPMENTS, POSSIBLE PROBLEMS AND SOLUTIONS

In addition to the fleximode projects which have been described in detail, other programmes combining on- and off-campus delivery have been introduced into the Western Australian TAFE system. Some of these programmes have been documented by TAFE External Studies College and a report describing these is presently being prepared. The main initiative to introduce fleximode, however, has come from two other colleges, which have each established an open learning centre with a co-ordinator, and they are offering a variety of fleximode programmes under the title of 'open learning'. The driving force behind these programmes appears to have been an administrative staff member, Malcolm Goff, previously located at the regional college where fleximode had been experimented with on an *ad hoc* basis.

In general, the fleximode programmes have been offered to small groups of students, and the teaching hours allowed for each programme are proportionate to the number of students. For example, if a subject is usually offered to a minimum of 16 students for 68 hours in traditional classes, a fleximode group of eight students would be allowed 34 teaching hours. Negotiation between the open-learning co-ordinator, the lecturer and, in some cases, the head of department or the senior lecturer is carried out to decide how this time should be divided up between face-to-face teaching, assignment marking, administration, telephone calls and other commitments.

This system, however, has not been without its problems, some of which have only just begun to surface as the programme has expanded. It is thus intended to discuss such problems, and others which have become apparent with the fleximode programmes described in this report. The main problems centre around fitting an irregular and an atypical teaching schedule into TAFE colleges' present organization, developing resource material, promoting the idea of fleximode with TAFE staff, and establishing sound reasons for introducing fleximode.

Fitting Fleximode into the College Organization

The fleximode programmes described in the report were not difficult to fit into the college programme, mainly because none of these programmes deviated from the usual college timetable. For the two trade subjects, the on-campus time was similar to block release time; Accounting 1A was offered week-about to two groups so the lecturer was teaching every week, and the lecturer in Child Care was paid for the usual teaching time. With the TES subjects, the lecturers were able to accommodate the on-campus component as they did not have the same timetable constraints as lecturers in other colleges.

This was not so with some of the college-based open learning programmes where the lecturers usually had an irregular face-to-face teaching schedule for their fleximode subject. This posed few difficulties for part-time lecturers but there appeared to be a problem when full-time lecturers were involved. In general, lecturers within all TAFE colleges except TES are expected to 'teach', that is, to stand up in front of a class, for a regular number of hours each week, and have regular DOTT time. Any deviation from this results in difficulties in timetabling and problems due to staff expectations.

To some extent the problem of irregular teaching hours has occurred previously with other subjects which do not have regular weekly attendance, for example, with trade subjects where students attend in blocks of two, three or four weeks. This has been overcome by calculating a lecturer's teaching load on an average basis over a longer period than a week, for example, for a fortnight or a semester. However, this is not so easy with fleximode when the lecturer has only one fleximode subject and the remainder of his/her teaching time attracts regular weekly attendance.

The lecturer could be asked to 'fill the gaps' with curriculum development work or other 'special duties', as is done at TES using the same formula applied there. However, the problem is that this is not 'teaching', and there may have to be some negotiation with lecturers to decide on an equitable time allowance for this. Both lecturers involved in the fleximode trade programmes prepared their own materials but neither believed the time allowance given was equitable.

Other Types of 'Teaching'

Another type of teaching that has to be allowed for in fleximode is marking and administrative time. Lecturers usually do their marking or administration during DOTT time or in their own time. It may not appear to be equitable if lecturers gain what appears to be extra DOTT time (although this is only fleximode 'teaching' time). Observations of lecturers during one of the fleximode programmes indicated that this can cause conflict between staff members. Ultimately, what is required is more flexibility in what can be termed 'teaching' and the acceptance by lecturers of a more diversified work load.

As with the preparation of materials, however, decisions have to be made about the rate of payment for other types of 'teaching'. If equitable arrangements can be put into place, lecturers may become more sympathetic, or even enthusiastic, about changes to their routine.

Payment for Fleximode - Off-Campus

In the fleximode programmes described, only the lecturer delivering Accounting 1A was not satisfied with the time allowance given for marking the extra assignments generated by fleximode. However, other lecturers suggested that some decision should be made about a fair rate of payment and this should become uniform across all colleges offering fleximode.

It may be recalled that in Victoria, marking attracts only half the payment rate allowed for distance learning assignments. This is based on the hypothesis that less detailed marking is required if there is regular face-to-face contact with the students. However, this arrangement is not very popular, (Scorgie, pers. comm., 1988). Clearly more data needs to be collected from lecturers involved in fleximode so that an equitable standard can be set.

In the open learning programmes introduced in the colleges, the proportion of overall time allowed for marking was

decided by the lecturers. However, in discussion with these lecturers, it was found that some were able to find enough time for marking only because some of the students left the course or did not hand in all of the assignments. If all of the students who began the class continued and handed in all their assignments, the lecturers estimated that they would have been under-paid for the off-campus component. It would therefore appear that assignments took longer to mark than anticipated. On the other hand, if more time is allowed for marking and this is based on initial student enrolment in a subject, it is possible that lecturers could be overpaid if a number of students leave the course.Murdoch University, WA, pay their distance education tutors in instalments, based on the number of students enrolled when the payment is made. It may be necessary to adapt this system to TAFE colleges.

Payment for Fleximode - On-Campus

There is also an issue as to whether delivery staff should be paid as lecturers or tutors for the on-campus component of fleximode when these are conducted as tutorials. Should lecturers then be paid less, in the same way that universities pay a lower rate for tutorials compared to lectures? If this were done within the present system with full-time lecturers, the administrative problems with fleximode would be compounded. For part-time lecturers it would not be so difficult. However, in a traditional four-hour class, such as Accounting 1A, the teacher does not normally lecture for four hours, so that any move to classify some of the fleximode classes as different from traditional classes may be inequitable. This poses another problem. How should the lecturer use the on-campus time for a fleximode subject?

Use of On-Campus Time

In the fleximode programmes studied, it was shown that lecturers used the on-campus time in many different ways, depending on the subject, for example, tutorials, practical sessions, or teaching. The Accounting 1A lecturer in particular found that he was trying to teach the total course in half the time and this was quite stressful. Both he and the TES lecturer in Municipal Practice C Part 1 also found they did not have sufficient time to examine applications of the theory with the students. Discussion with some of the lecturers involved in an Open Learning Centre suggested that they seemed to have similar problems. On the other hand, the Child Care lecturer, who had well-planned resource materials, found the on-campus time quite relaxing with sufficient time to discuss practical applications because the course was planned so that the students studied most of the material by themselves. The students also seemed to perform very well. If this is an effective way to organize fleximode, the need for well-designed course materials is paramount.

However, this arrangement may not be effective for all subjects. Advice was given that, with introductory subjects such as Accounting 1A, it may be important to offer introductory face-to-face teaching sessions to ensure the students became familiar with the basic concepts required before they start studying by themselves. It would appear that the way the on-campus time is used in courses will have to be decided on the basis of the requirements of the particular subject, the needs of the students and the quality of the resource materials. However, if the time in class is more stressful compared to traditional face-to-face instruction, as was for the Accounting 1A lecturer,and the lecturer is not compensated for this, it is not likely that many TAFE lecturers will be willing to try fleximode.

Developing Fleximode Resource Material

Providing the resource material required by fleximode is also of major concern. Learning materials produced for traditional distance education may not always prove suitable, as was found with Accounting 1A. Blesing (1987) suggested that it may be more useful to develop a resource package for each subject, with a study guide that is adaptable to any mode. TES within Western Australia have recently begun to produce such packages. These materials are not very costly if they can be used widely throughout TAFE. Preparation of such resources will also enable TAFE to deal with fluctuating course demand from small industry sectors, such as the motorcycle industry.

These materials could also prove of great benefit to other lecturers. For example, the Child Care lecturer involved in teaching by fleximode found it very useful to use some of the fleximode materials and activities in her traditional class. She also found preparing such materials to be helpful in conceptualizing ideas about the course.

The major problem is financing the initial development of resources and then continuing to keep them up-to-date. The present technology does make such a process easier than has been previously especially if, as suggested by Blesing (1987), use is made of desk-top publishing techniques and loose-leaf folders for particularly dynamic subjects such as computing. However, processes are needed to be put in place to ensure a regular review of materials. As the Accounting 1A fleximode programme demonstrated, it is essential to have up-to-date materials.

The provision of teaching aids in the more practical courses, such as Petrol Fuel Injection also needs consideration although there are a number of institutions which have had considerable experience with this, such as the open learning institutions in Britain and North America. The distance education programme at Murdoch University in Western Australia, has also shown considerable ingenuity in devising practical teaching aids for its distance education students (Kember 1982). It is important that some research is carried out by the TAFE colleges to find out how such problems have been resolved.

Use of Technology

Utilizing the technological opportunities that exist for both teaching and administering study programmes is also an important adjunct to the development of fleximode. Bowles (1987) suggests using the existing databank networks to form the basis of an inter-organizational information system to enable colleges to share resources and knowledge relating to fleximode programmes. The increased utilization of audio conferencing, videos, computers, interactive television and other technology could also be useful features to include when planning future fleximode programmes. Studies such as that by Vadas (1986) have demonstrated that using media such an interactive video can lead to more effective learning. Much of this technology, however, is

very expensive and the cost will have to be weighed against the degree of increase in educational effectiveness (Walsh 1989).

Staff Development

One of the important elements in all fleximode programmes is ensuring adequate preparation for staff. Fleximode requires different techniques from traditional class teaching and distance education, and the success of the programme will depend on whether lecturers are equipped with the knowledge and techniques needed. It may be recalled that this was one of the features stressed by Scorgie (1988) as vital to the successful implementation of their programmes. The introduction of alternative delivery systems appear to have proceeded much more smoothly and accepted more readily by staff when staff development was an important cornerstone of the programme, such as at Light college of TAFE (Mitchell 1988) and Yalloum College of TAFE (Daye & Hanley 1987). When staff development is neglected, as it was in the Accounting 1A programme described in this report, lecturers encounter many problems that could be avoided. Waugh and Punch (1987) cite studies such as that by Gross, Giacquinta and Bernstein (1971) that have found that, if the skills and knowledge necessary to perform a new teaching role are not present, there is considerable blockage to change.

Preparation of staff also involves finding ways to promote fleximode in the TAFE system and to gain the co-operation of the lecturers.

Gaining Staff Co-operation

As was seen in the present report, it was quite difficult to find either a college or lecturer willing to experiment with fleximode. The problem is that any deviation from a lecturer's usual teaching practices is done at some cost, and usually involves extra work and some stress. There has to be some way of compensating for this cost. The commitment of most of the lecturers who were involved in the fleximode programmes studied for the present report was voluntary and they were personally rewarded by offering a programme they believed to be worthwhile. However, many lecturers who have used traditional teaching methods quite successfully for a number of years may not be so interested in change, especially when they can see little benefit for themselves or the students and the change may involve considerable cost on their part.

Waugh and Punch (1987) reviewed studies relating to the implementation of educational change and teachers' receptivity to change. They extracted six general variables:

- basic attitudes to education;
- the extent to which the fears and uncertainties associated with change are alleviated;
- practicality of the change in operation;
- perceived expectations and beliefs about the change;
- perceived school support for the change;
- personal cost appraisal of the change.

Some of these variables, such as basic attitudes to education, cannot easily be changed, but other variables, such as the alleviation of the fears and uncertainty, school support and, to some extent, the teacher's personal cost appraisal, can be influenced by introducing the change very carefully. Many of these variables were taken into account when introducing open learning to the Light College of TAFE and this appears to be proceeding well. The key people in the process in WA will be the administrators planning the change, and those responsible for managing the process, such as the open learning co-ordinators. These co-ordinators should be selected carefully, not only for their enthusiasm for the delivery mode, but for their understanding of, and effective communication with, the lecturers.

Reasons for Introduction

The final problem which needs to be resolved is - why introduce fleximode? The results of this report indicate that it is slightly cheaper to deliver than the more traditional delivery methods, this being an important consideration in these times of budgetary constraints. However, the costing was estimated over a five year period. The initial costs of introducing fleximode into a TAFE system will require an immediate monetary outlay on staff development and preparation of resources.

The present report does indicate that student outcomes such as results and retention rates were not significantly different from traditional classes; most students appreciated the more flexible programme and some even found they learnt better. However, it must be reiterated that most of the programmes studied in this report were self-selected and delivered by lecturers who were keen to try this mode of delivery. Studies in educational innovations have found that if people are committed to new methods they are frequently successful, more as a result of their enthusiasm and dedication than the method in question. This point has to be considered carefully when assessing the results of these programmes. A counter argument is that the outcomes of the Accounting 1A fleximode programme were still comparable to the traditional delivery methods although the lecturer did not begin with the same commitment. On the other hand, this lecturer was the only volunteer that could be found for this programme so perhaps he, too, was unique.

As an alternative to delivery by correspondence, it seems that fleximode has a great deal to offer to students who are able to study on-campus for part of the time. Only one student in all of the fleximode programmes gave correspondence as his first choice of delivery mode. In addition, the majority of students indicated that they found learning in a classroom from a teacher more effective and less difficult than learning by themselves.

It is difficult to recommend on the strength of the results of this report to what extent fleximode should replace face-to-face teaching in the TAFE system. People such as Scorgie (1988) would argue that, in general fleximode suits TAFE's adult learning population because it allows flexibility and autonomy and requires self-direction. As the learner has to solve many of his/her own problems, it also has the potential for more efficient learning and long-term retention, as some of the students in the present study discovered. There does, however, have to be some balance because it is not suitable for all adult learners or for all subjects. There were some students in the present report who just did not like fleximode. It should also be recalled that the Local Government

fleximode programme was introduced because the students were not able to study efficiently off-campus. The programme was begun because the students wanted more, not less, on-campus study. The lecturers in this study also did not find that in general, fleximode had any major advantages for them compared to face-to- face teaching.

There also appears to be disagreement about which subjects are suitable for fleximode; for example, is it suitable for practical subjects? Results from the two trade subjects appeared to indicate that it may depend on whether the students learning the theory are able to immediately apply this to a practical situation as they were with the Motorcycle Mechanic programme. It appears that a great deal of research may be needed to pinpoint which aspects of a subject make it suitable for fleximode.

All these problems need to be carefully considered and resolved if fleximode is to be introduced more widely.

In addition, there will be need for forward planning, with careful consideration given to finding solutions to all the problems that have been discussed. The most important consideration seems to be to recognize, as John Mitchell did, that organizations are made up of people doing, and therefore are based on individual ideas, values and actions. The people being asked to change must be listened to, reassured, allowed to participate in a meaningful way and to develop their roles within a flexible framework.

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APPENDIX 1

Telephone Survey: Why do students drop out of courses?

Subject: Accounting 1A

Our goal in this survey is to seek some information about why people leave TAFE, for instance, start a subject and then stop attending classes. Such information can then be used by TAFE to improve the quality of the services that are offered. Our records indicate that you began studying Accounting 1A at Thornlie College of TAFE but seem to be no longer attending.

1 *At which point in the semester did you stop attending classes?* (Find out approximately how many weeks into the semester student was before withdrawing). If student is still attending, thank him/her, apologize, and discontinue interview.

2 *Why did you withdraw?* (Prompt: and were there any other reasons? Was that all?)

3 *What were your main reasons for enrolling in the subject?*

When students have been asked about their experiences while studying at TAFE, they have spoken about a number of factors that have influenced whether they continued or not. I'd like to know how you rate the important of these factors in influencing your decision to withdraw.

Could you please let me know if any of the following was a very important factor, an important factor or not at all important.

What about ....?

		Does Not Even Have Significance	Not at All Important	Important	Very Important
4	*Study problems*	1	2	3	4
5	*Demands from family, home duties*	1	2	3	4
6	*Personal demands*	1	2	3	4
7	*Teacher unsuitable/disinterested*	1	2	3	4
8	*Course material too hard*	1	2	3	4
9	*Course material unsuitable to needs*	1	2	3	4
10	*Course was boring*	1	2	3	4
11	*Class unfriendly/felt lonely*	1	2	3	4
12	*Employment demands*	1	2	3	4
13	*Travelling/parking etc*	1	2	3	4

If students studied by fleximode, ask q 14-16, if not go to introduction before q 17

14 *Why did you choose the fleximode class?*

15 *Did you know it as a fleximode class?*

Yes 1

No 2 - GO TO Q 17

16 *How did you understand the class was to be organized?*

Finally, I'd like to know just a few details about you yourself in order to put your answers into perspective.

17 *At what level did you leave school?*

18 *Have you undertaken any other study since leaving school?*

Yes 1

No 2 - GO TO Q 21

19 *Did you complete this?*

Yes 1

No 2 - GO TO Q 21

20 *What was the highest level successfully completed?*

21 *Are you presently employed?*

Yes 1

No 2 - GO TO Q 23

22 *If YES, what is your occupation?* (Ask details about firm, duties in firm).

23 *How are you presently occupied?*

24 *Is English your first language?*

Yes 1

No 2

Thank you for your time and co-operation

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APPENDIX 2

Evaluation of Fleximode, 1989

Student Questionnaire

MAY
1989

Subjects: *Play and Learning 1*
Language 2

Course: *Associated. Dip. Social Science*
(Child Care) part-time

Dorothy Toussaint

Curriculum Branch, TAFE

We are always keen to improve the way subjects are offered in TAFE courses and to find out more about the ways in which those taking our courses prefer to study. It would be very helpful if you could answer the following questions. Your responses will be kept confidential.

1 Thinking of the subject, Play and Learning 1

(a) To what extent were you satisfied with the way the material was presented? (Circle the number that corresponds to the extent of your satisfaction).

Very Dissatisfied				Very Satisfied
1	2	3	4	5

(b) Could you give some reasons for your answer to 1(a).

(c) What were the things you liked best about Play and Learning 1?

(d) What didn't you like about Play and Learning 1?

(e) Could you list any ways in which the course could have been better presented/taught?

2 Thinking of the subject, Language 2

(a) To what extent were you satisfied with the way the material was presented? (Circle the number that corresponds to the extent of your satisfaction).

Very Dissatisfied				Very Satisfied
1	2	3	4	5

(b) Could you give some reasons for your answer to 2(a).

(c) What were the things you liked best about Language 2?

(d) What didn't you like about Language 2?

(e) Could you list any ways in which the course could have been better presented/taught?

Advantages/disadvantages of fleximode

3 To what extent were the following important to you when studying the present subject by fleximode?

		Extremely Important				Not at all Important
(a)	Mixing with other students	1	2	3	4	5
(b)	More time to study by myself in my own time	1	2	3	4	5
(c)	Doing written work or assignments	1	2	3	4	5
(d)	Studying or learning in class with a teacher	1	2	3	4	5
(e)	Able to talk to teacher on a one-to-one basis by telephone or face-to-face	1	2	3	4	5
(f)	Not having to attend class every week	1	2	3	4	5

Answer 4(a) and 4(b) if you have ever studied by correspondence

4 (a) Comparing your fleximode subject with other subjects that you have studied by correspondence, what is the main advantage of studying by fleximode instead of correspondence?

(b) What is the main disadvantage of fleximode study compared to studying by correspondence?

Answer 5(a) and (b) if you have studied by going to classes every week

5 (a) Thinking about other subjects that you have studied by going to classes every week, what is the main advantage of studying by fleximode instead?

(b) What is the main problem/difficulty in studying by fleximode rather than attending classes every week?

6 **Organization of fleximode class**

To what extent was it true that:	Not at all True				Absolutely True
(a) You understood from the beginning how your class was to be organized	1	2	3	4	5
(b) You knew which parts of the course you had to study by yourself	1	2	3	4	5
(c) You knew from the start when you had to attend class	1	2	3	4	5
(d) You knew when assignments, tests and exams would be done	1	2	3	4	5
(e) The study guide was easy to understand	1	2	3	4	5
(f) You were able to have your problems cleared up without too much difficulty	1	2	3	4	5
(g) Fleximode made the study of this subject more convenient for you personally.	1	2	3	4	5

7 **Understanding subject content**

How difficult did you find it:	Not at all Difficult				Extremely Difficult
(a) To understand the subject when studying by yourself	1	2	3	4	5
(b) To understand the subject when the teacher taught (discussed) it in class	1	2	3	4	5

8 (a) If the college offered another subject by fleximode next year, would you: (Rate 1-3 in order of preference)

- ☐ Choose fleximode again
- ☐ Prefer to go to class every week
- ☐ Prefer to study by correspondence

(b) Could you give your reasons for this.

9 (a) To what extent are any of the following a difficulty or a problem for you when attending classes?

	Not at all Difficult				Extremely Difficult
Getting transport (travelling) to the college	1	2	3	4	5
Child care	1	2	3	4	5
Fitting classes in with employment demands (e.g. shift work, country travel)	1	2	3	4	5
Finding enough time to study	1	2	3	4	5
Fitting classes in with other personal commitments	1	2	3	4	5
Finding parking at the college	1	2	3	4	5
Getting assignments in on time	1	2	3	4	5
Participating in class discussions	1	2	3	4	5
Motivating myself to study at home away from class	1	2	3	4	5
Keeping to a set plan of study	1	2	3	4	5
Concentrating during class after working all day	1	2	3	4	5
Having to find my own reference material	1	2	3	4	5

10 (a) Could you rate the effectiveness of the following ways of learning for you.

	Most Effective				Least Effective
Studying by yourself from textbooks, study guides	1	2	3	4	5
Learning from a lecturer/ teacher in class	1	2	3	4	5
Doing research from many different books and journals	1	2	3	4	5
Workshops/practical sessions/ doing things for myself	1	2	3	4	5
Tutorials/class discussions with teacher	1	2	3	4	5
Giving a talk, demonstration etc. to the class	1	2	3	4	5
Using audio-visual material e.g. tapes, videos	1	2	3	4	5
Self-paced learning that is, working through the course by yourself	1	2	3	4	5

(b) Are there any other ways of learning that you have found to be effective for you?

_____

ABOUT YOU

11 Age ____

12 Gender

13 At what level did you leave school?

14 Qualifications gained since leaving school.

15 Other courses completed since leaving school.

16 What type of family situation describes you best?

Living with partner - no children	1
Living with partner - children to care for	2
Single - still living with parent(s)	3
Single - not living with parent(s), no children	4
No live-in partner but have children to care for	5

17 Do you have a paid job or are you self-employed?

Yes	1	How many hours do you work
No	2	in an average week _____

18 How long have you been employed in the Child Care field?

_____

19 Below could you please add any other comments you would like to make about this course.

Date Completed _____

THANKS VERY MUCH!

Fleximode Delivery in TAFE Colleges

1989

Teacher Questionnaire

Dorothy Toussaint

Curriculum Branch, TAFE

1 NAME: _____

2 INSTITUTION: _____

3 SUBJECT: _____

4 NUMBER OF STUDENTS: _____

5 ATTENDANCE PATTERN OF STUDENTS: _____

_____

6 REASON FOR INTRODUCING FLEXIMODE: _____

_____

_____

7 Have you taught this subject in any other way before?

Face-to-face teaching 1

Correspondence 2

Other _____

What changes did you notice in regard to:

8 • the way you covered the material the students had to know

9 • the way you used the time in class

10 • the way the students used the class time

11 • the assignments completed by the students

12 • the students' understanding of the subject

13 How were you paid for fleximode delivery?

14 Do you believe this was equitable when you think of your working load for this subject:

Yes 1 - GO TO Q 16

No 2

15 What would have been a more equitable mode of payment?

What do you see as the major advantages of fleximode delivery in comparison to conventional face-to-face teaching

16 • for the students?_____

17 • for you?_____

18 • for TAFE in general?_____

What do you see are the major problems or difficulties of fleximode delivery compared to face-to-face teaching

19 • for the students?_____

20 • for you?_____

21 • for TAFE in general?_____

22 Have you ever taught by correspondence?

Yes 1

No 2 - GO TO Q 29

What do you see as the major advantages of fleximode compared to teaching by correspondence

23 • for the students?_____

24 • for you?_____

25 • for TAFE in general?_____

What do you see as the major problems or difficulties of fleximode delivery compared to teaching by correspondence

26 • for the students?_____

27 • for you?_____

28 • for TAFE in general?_____

29 If you were asked to teach the same or another subject by fleximode again, what would be your reaction?

30 What sort of students seem to gain the most benefit from fleximode?

31 What sort of students cope best with fleximode?

32 Which subjects are most suited to fleximode delivery?

33 Can you make any recommendations about the way fleximode delivery of your subject could be improved?

34 Can you make any recommendations for the use of fleximode delivery across the TAFE system (prompt - what sort of strategies/changes could make fleximode delivery easier?)

35 Do you have any other comments to make regarding your experience with fleximode, or fleximode in general?

APPENDIX 4

Composition Of Groups Responding to Survey

TYPE OF GROUP

Characteristic	Petrol Fuel Injection	Motorcycle Mechanic	Child Care '88	Child Care '89	Accounting 1A	Local Government
(N)	(8)	(4)	(6)	(9)	(20)	(16)
Gender						
Male	8	4	0	0	5	14
Female	0	0	6	9	15	2
Age						
Unknown	0	0	0	0	1	1
Less than 20 year	0	4	0	1	2	0
20 to 25 years	0	0	4	2	7	2
26 to 30 years	1	0	0	1	2	6
31 to 40 years	4	0	2	5	4	6
More than 40 years	3	0	0	0	4	1
$\bar{x}$	38.33	17.5	26.0	29.0	29.89	31.47
sd	10.44	1.29	8.46	6.75	9.66	5.76
Year Level Left School						
Unknown	0	0	0	0	1	0
Before Year 10 1	0	0	0	1	0	
Year 10	4	2	4	3	7	4
Year 11	2	1	0	1	4	5
Year 12	1	1	2	5	7	7
Family Situation[a]						
Single - with parents	0	3	-	1	5	1
Single - no children	0	1	-	3	2	0
No partner - children	0	0	-	1	2	0
With partner - no children home	3	0	-	0	6	5
With partner - children	5	0	-	4	5	10

[a] The 1988 Child Care Group were not asked for details about this.